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August 16, 2021

Mr. Chip Poalinelli  
Section Manager - California Site Cleanup Section I  
United States Environmental Protection Agency  
75 Hawthorne Street  
San Francisco, California 94105

Subject: Quarterly Performance Evaluation Report, Interim Groundwater Containment Remedy,  
Omega Chemical Superfund Site, Whittier, California

Dear Mr. Poalinelli:

Enclosed for your review is the Quarterly Performance Evaluation Report for the Operable Unit 1 (OU-1) Interim Groundwater Containment Remedy (GCR), Omega Chemical Superfund Site, Whittier, California. The purpose for this report is to provide the USEPA with data associated with the operations of the OU-1 Groundwater Containment Remedy during the second quarter 2021.

This report complies with the requirements in the April 2007 Performance Standards Verification Plan, Operations, Maintenance, and Monitoring Manual for the operation of the GCR. Overall, this report is being provided to satisfy the data reporting requirements defined under Section IX of the February 2001 Consent Decree No. 00-12471 between the USEPA and OPOG by presenting data collected during the period and providing evidence that the GCR is compliant with the OU-1 Groundwater Removal Action Objectives.

Should you have any questions, regarding the above, please contact me.

Sincerely,

Omega OU1/OU3 LLC



Edward Modiano  
Officer, Omega OU1/OU3 LLC



Jaime Dinello, PE  
Project Manager

cc: Don Indermill, DTSC



*de maximis, inc.*

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August 16, 2021

INTERIM GROUNDWATER CONTAINMENT REMEDY  
QUARTERLY PERFORMANCE EVALUATION REPORT  
SECOND QUARTER 2021  
OMEGA CHEMICAL SUPERFUND SITE, OU-1

*Prepared for:*

Omega OU1/OU3 LLC

*Prepared by:*

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# INTERIM GROUNDWATER CONTAINMENT REMEDY OPERABLE UNIT 1 OMEGA CHEMICAL SUPERFUND SITE

## Quarterly Performance Evaluation Report Second Quarter 2021

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## INTERIM GROUNDWATER CONTAINMENT REMEDY OPERABLE UNIT 1 OMEGA CHEMICAL SUPERFUND SITE

### Quarterly Performance Evaluation Report Second Quarter 2021

#### **1. INTRODUCTION**

This Quarterly Performance Evaluation Report (QPER) has been prepared for the Interim Groundwater Containment Remedy (GCR) on behalf of the Omega Chemical Site Potentially Responsible Parties Organized Group (OPOG) to comply with the February 2001 Consent Decree (CD) No. 00-12471 between the United States Environmental Protection Agency (USEPA) and OPOG (USEPA, 2001). As stated in the September 2005 Removal Action Memorandum (USEPA, 2005), the primary goal of the selected remedy is to contain the highest levels of contamination dissolved in groundwater within Operable Unit 1 (OU-1), so that the contamination does not migrate and contribute to the downgradient regional groundwater plume. To achieve this goal, the OU-1 Groundwater Containment Remedy (GCR) was installed and began operating in 2009. The location and components of the GCR are presented on Figure 1.

The GCR Remedial Action Objective (RAO) monitoring requirements are specified in the Performance Standards Verification Plan (PSVP) (CDM, 2007). Updated monitoring requirements will be included in the Final OU-1 Groundwater Containment System Operations Monitoring & Maintenance (OM&M) Manual. The Draft OM&M Manual was submitted to the USEPA on July 3, 2019 and is currently under review by the USEPA. Current monitoring requirements for this reporting period are as follows:

- GCR operational data are collected to support the determination of compliance with the second RAO (RAO #2, treated vapor emissions and treated groundwater discharge) as well as to conform to the requirements of the PSVP and the current OM&M Manual (CDM, 2010). These data are included in Section 2.
- Quarterly piezometric data from the PSVP-specified monitoring locations are plotted to illustrate that groundwater flow is toward the pumping wells (CDM, 2005). The goal of this

monitoring is to verify hydraulic containment of groundwater contamination within OU-1 is achieved. According to the CD, these data provide the primary documentation of containment required by RAO #1 (USEPA, 2001). These data are included in Section 3.

- Semi-annual water quality monitoring data are collected in January and July. Thus, no water quality monitoring data were collected this quarter.

## **2. GCR SYSTEM OPERATIONS THIS QUARTER**

The GCR System functioned this quarter with minimal issues or downtime. Below is a list of non-routine operations and maintenance items which occurred during the second quarter:

- The GCR System was shut down between April 23, 2021 and April 28, 2021 due to a low-level of anti-scalant which was necessary to prevent the build-up of mineral deposits inside the air stripper which may adversely impact treatment performance. During this period the previous anti-scalant product was discontinued and the manufacturer was unable to identify a replacement product and deliver it to the site to avoid a shut down. Going forward the GCR System will utilize NALCO® 9353. Information regarding this anti-scalant will be included in the Final OM&M Manual.
- Annual air stripper cleaning was performed on May 6, 2021.
- The GCR System was shut down between May 24, 2021 and June 2, 2021 due to a low level of anti-scalant which was necessary to prevent the build-up of mineral deposits inside the air stripper which may adversely impact treatment performance. The new anti-scalant product was used at a faster rate than anticipated. Going forward the O&M Contractor shall notify the anti-scalant provider when the tank reaches 65 gallons remaining (as opposed to 45 gallons which was the previous standard) and will have two 5-gallon buckets onsite of emergency reserve.
- A new alarm condition was added on June 7, 2021 which shuts down the system in the event of low anti-scalant conditions. To facilitate this alarm the GCR System was shut down between June 25, 2021 and June 29, 2021 to install a new float switch in the anti-scalant tank.
- The temperature/humidity sensor was replaced and rewired on June 7, 2021.
- Continued troubleshooting of the DPE-9 pressure transducer was conducted. The PLC scaling was modified on June 7, 2021 to match the installed transducer.

The GCR had an operational run time of approximately 81 percent during the second quarter (Table 1). Approximately 1.0 pound of Volatile Organic Carbon (VOC) mass was removed from treated groundwater (via the air stripper) during the second quarter, compared to 1.1 pounds removed during the previous quarter. Figure 2 shows the cumulative mass removed since 2009. The total amount of water treated during the first and second quarter was 532,800 and 463,900 gallons, respectively.

### EXTRACTION WELLS

The Extraction Wells (EWs, EW-1 through EW-5) were mechanically functional this quarter. Attachment A, Table A-1 includes measurements for each EW during this quarter, including pump runtime, extracted volume, operational flow rate and average flow rate. The measured depth to water (during the quarterly piezometric monitoring) and targeted extraction interval (i.e., screen interval) are discussed in Section 3.

In addition to the five GCR EWs, six dual-phase extraction (DPE) wells are extracting groundwater within OU-1. These DPE wells were constructed in 2014 as part of the Full Scale On-Site (OU-1) Soil Remedy under the 2010 Consent Decree between the USEPA and OPOG (USEPA 2010). These wells are designated DPE-3, DPE-4, DPE-5, DPE-8, DPE-9, and VE-10D and are shown on Figure 1. Although installed as part of the OU-1 soil remedy to increase subsurface vapor removal, the DPE wells are currently extracting most of the water and contaminant mass. Pumping from the DPE wells accounted for approximately 96% of groundwater extracted in the second quarter.

Other groundwater data collected during the quarter, including data from groundwater pumped from the DPE wells, are summarized in Attachment B. This includes operational information such as volume of groundwater extracted this quarter, targeted extraction interval (i.e., screen interval), and approximate depth to water.

### AIR STRIPPER

VOC concentrations in groundwater prior to and after treatment by the air stripper are summarized in Table 2. These data show continued effectiveness in transferring VOCs from the aqueous phase to the vapor phase for treatment by the Vapor Phase Granular Activated Carbon (VGAC). Air stripper influent concentrations over time are shown on Figure 3. Laboratory analytical results and associated data quality assessments are included in Attachment C.

### TREATED VAPOR DISCHARGE

The GCR operated in accordance with treated vapor discharge limits and VGAC operations requirements. The carbon changeout criteria were not triggered during this quarter (Attachment A, Table A-2). The VGAC change out criteria are currently based on the existing Health Risk Assessment (CDM Smith, 2015). A revised Health Risk Assessment was prepared and submitted to the USEPA on March 18, 2019 and is currently under review by the USEPA. The most recent carbon changeout of the lead and lag vessels was completed on July 8, 2020.

Table 3 shows the chemical-specific concentrations in the VGAC influent, midpoint, and effluent and effluent discharge limits for this quarter. Attachment A, Table A-2 show VGAC operational conditions for flow rate, temperature, and total VOC emissions as indicated by a Photo Ionization Detector (PID).

### TREATED EFFLUENT DISCHARGE

Discharge compliance samples are collected on a quarterly basis from the designated sample collection point (20039A) to confirm compliance with the current Sanitation Districts of Los Angeles County (SDLAC) Industrial Waste Discharge Permit (No. 20039). The SDLAC permit is dated August 8, 2017 and is scheduled to expire on August 7, 2022. The results for this quarter's effluent samples were provided to SDLAC in the self-monitoring report (Attachment D). The analytical results show that all analytes were within SDLAC permit limits or non-detectable above reporting limits.

### **3. QUARTERLY PIEZOMETRIC MONITORING**

A network of five EWs, 11 groundwater observation wells, and four piezometers are included in the quarterly piezometric monitoring. The quarterly piezometric data are provided in Attachment E, Table E-1. Included in this table are the screen interval, and approximate depth to water. Historical piezometric data are presented in time series charts in Attachment E, Figures E-1 through E-20. Note that observation wells OW-4a and OW-4b, included in the PSVP, were transferred out of the OU-1 program in 2017 and are now monitored by OPOG and other Settling Work Defendants as part of OU-2 in accordance with the OU-2 Consent Decree (USEPA 2017).

Attachment F provides a review of the piezometric conditions during this quarters piezometric

monitoring. As demonstrated by Figure F-1, horizontal containment of OU-1 groundwater continues to be achieved. It is also noted that the regional drought conditions and the pumping from Full Scale On-Site (OU-1) Soil Remedy DPE wells have reduced water levels locally to below the pump intake of some GCR extraction wells. The combination of all these factors has essentially dewatered the aquifer within the OU-1 boundary, and thus is providing horizontal containment. In addition, as requested by USEPA (APTIM, 2021), additional discussion on the inconsistent flow in VE-10D, DPE-3, DPE-5, and DPE-8 is included in Attachment F.

Vertical gradients are examined at a well triplet and two well pairs (Figure F-2). There is minimal hydraulic connection between the shallow extraction zone (A-Zone) and the deeper B-Zone due to the presence of a confining layer which prevents significant downward vertical transport (Figure F-4). The significant head differential between the A-Zone and B-Zone is further evidence of very limited hydraulic connection between the zones.

Field forms for the quarterly piezometric monitoring are included in Attachment G.

#### **4. SEMI-ANNUAL WATER QUALITY MONITORING**

A network of five EWs and 11 groundwater observation wells are included in semi-annual water quality monitoring, conducted in the first and third quarters. Thus, no water quality monitoring was conducted during the second quarter.

#### **5. SUBMITTALS DURING THE QUARTER**

The following submittals were provided to USEPA this quarter as part of the OU-1 GCR:

- Interim Groundwater Containment Remedy QPER, First Quarter 2021 (May 17, 2021)

#### **6. PLANNED ACTIVITIES**

Planned operational and monitoring activities scheduled for the third quarter 2021 include the following:

- Quarterly piezometric monitoring
- Semi-annual groundwater monitoring
- Monthly assessment of VGAC effectiveness and need for carbon changeout

- Monthly and quarterly assessment of data to determine if system adjustments are appropriate
- Quarterly performance reporting
- Replacement of DPE-5 transducer
- Replacement of damaged OW-2 well box
- Shutdown of GCR System and conduct aquifer testing as part of the voluntary OU1 data collection program (Engineering Analytics, 2021) to evaluate remaining contaminant mass in OU-1 as conditionally approved by USEPA on April 29, 2021 (USEPA, 2021)  
(note that this activity may shift into the fourth quarter)

## 7. REFERENCES

- APTIM. (2021). Omega: Interim Groundwater Containment Remedy – Annual Report (3<sup>rd</sup> Quarter 2020), May 6, 2021. Email from Tomas Parina to Jaime Dinello.
- CDM. (2005). *Removal Action Plan and Preliminary Design Report*, December 16.
- CDM. (2007). *Performance Standards Verification Plan for Phase 1a Area Groundwater Treatment System*, April 19.
- CDM. (2010). *Final Operations, Maintenance, and Monitoring Manual*, February 19
- CDM Smith. (2015). *Memorandum: Treatment of Effluent from Groundwater Treatment System and Soil Vapor Extraction, Omega Chemical Superfund Site, Whittier, California 90602*, February 26.
- Engineering Analytics, Inc. (2021). *Conceptual Data Collection Plan for OU1 Remediation System Optimization and Evaluation*. Draft Technical Memorandum. March 16, 2021.
- USEPA. (2001). Consent Decree No. 00-12471, February 28
- USEPA. (2005). *Removal Action Memorandum*, September 27
- USEPA. (2010). Consent Decree Docket No. 10-05051, October 6
- USEPA. (2017). Consent Decree No. 2:16-cv-02696-GW-E, March 31
- USEPA. (2021). Confirmation of Path Forward on OPOG's Voluntary Data Collection Work on OU1, April 29

# **TABLES**

**Table 1**  
**GWTP Operational Summary and Mass Removed Totals**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**Second Quarter 2021**

Month	GWTP Runtime Percent <sup>1</sup> (%)	GWTP Runtime Hours (hrs)	Operational Flow Rate <sup>2</sup> (gpm)	Average Flow Rate <sup>3</sup> (gpm)	Total Gallons Processed <sup>4</sup> (gal)	Mass Removed <sup>5</sup> (lbs)
April 2021	81	581	4.6	3.7	158,400	0.3
May 2021	76	564	2.8	2.1	92,200	0.1
June 2021	86	617	5.7	4.9	213,300	0.6
<b>2nd Quarter 2021</b>	<b>Average = 81</b>	<b>Average = 587</b>	<b>Average = 4.4</b>	<b>Average = 3.6</b>	<b>Total = 463,900</b>	<b>Total = 1.0</b>
				<b>Cumulative Total<sup>6</sup></b>	<b>48,781,565</b>	<b>990.3</b>

**Notes:**

1. GWTP Runtime Percent is the percentage of total hours in the month that the GWTP actually operated.
2. Operational flow rate calculated from total gallons processed in the month and hours the GWTP actually operated in the month.
3. Average flow rate is calculated from total gallons processed in the month and total hours in the month, regardless of GWTP uptime.
4. Total gallons processed includes groundwater pumped to the GWTP from the Full Scale On-Site (OU-1) Soil Remedy DPE wells.
5. Mass removed is calculated from the average VOC concentration in the air stripper influent and discharge, and the total gallons processed. See Table 3.
6. The GWTP has to date treated 48,781,565 gallons of water and removed a cumulative total of 990.3 pounds of contaminant. See Figure 2.

gpm = gallons per minute

hrs = hours

gal = gallons

lbs = pounds

**Table 2**  
**Air Stripper Influent and Effluent Concentrations Demonstrating Proper System Function**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**Second Quarter 2021**

Sample ID	Sample Date	PCE	TCE	MeCL	1,2-DCA	Freon 11	Freon 113
OC_SP210_INF_040621	4/6/2021	110	13	5.0 U	1.0 U	11	64
OC_SP220B_EFF_040621	4/6/2021	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	5.0 U
OC_SP210_INF_050321	5/3/2021	98	11	5.0 U	1.0 U	9.1	59
OC_SP220B_EFF_050321	5/3/2021	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	5.0 U
OC_SP210_INF_060221	6/2/2021	160	24	1.0 U	0.90	9.1	120
OC_SP220B_EFF_060221	6/2/2021	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U

Notes:

INF = Air stripper influent water. Untreated water sample collected downstream of bag filters.

EFF = Air stripper effluent water. Treated water sample collected in discharge header upstream of SDLAC sample box.

All results are in micrograms per liter (ug/L)

U = not detected above reporting limit listed

PCE = Tetrachloroethene; TCE = Trichloroethene; MeCL = Methylene chloride; 1,2-DCA = Dichloroethane; Freon 11 = Trichlorofluoromethane;

Freon 113 = 1,1,2-Trichloro-1,2,2-trifluoroethane

**Table 3**  
**Vapor Phase GAC Concentrations Demonstrating Substantive Compliance with SCAQMD Regulations**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**Second Quarter 2021**

SCAQMD Chemical-Specific Effluent Limit <sup>1</sup>			28	12	18	12	12	6900	230	95
Sample ID	Sample Date	Units	PCE	TCE	1,1-DCA	1,2-DCA	BZ	MeCl	VC	CFM
OC_VGAC_INF_SP241_040621	4/6/2021	ppbv	25	4.0	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.5
OC_VGAC_INT_SP245_040621	4/6/2021	ppbv	0.90 U	9.0 U	0.90 U	0.90 U				
<b>OC_VGAC_EFF_SP242_040621<sup>2</sup></b>	4/6/2021	ppbv	<b>1.0 U</b>	<b>10 U</b>	<b>1.0 U</b>	<b>1.0 U</b>				
OC_VGAC_INF_SP241_050321	5/3/2021	ppbv	23	3.7	1.0 U	1.0 U	1.0 U	10 U	1.0 U	1.6
OC_VGAC_INT_SP245_050321	5/3/2021	ppbv	0.97 U	9.7 U	0.97 U	0.97 U				
<b>OC_VGAC_EFF_SP242_050321</b>	5/3/2021	ppbv	<b>0.99 U</b>	<b>9.9 U</b>	<b>0.99 U</b>	<b>0.99 U</b>				
OC_VGAC_INF_SP241_060221	6/2/2021	ppbv	30	4.6	1.0 U	1.0 U	1.0 U	10 U	1.0 U	2.2
OC_VGAC_INT_SP245_060221	6/2/2021	ppbv	0.92 U	9.2 U	0.92 U	0.92 U				
<b>OC_VGAC_EFF_SP242_060221</b>	6/2/2021	ppbv	<b>1.0 U</b>	<b>10 U</b>	<b>1.0 U</b>	<b>1.0 U</b>				
<b>Compliance with Effluent Limits?</b>			<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>

1. SCAQMD effluent limits are derived from the Health Risk Assessment (CDM Smith, 2015).

2. Bold text indicates vapor effluent results from the VGAC effluent required to meet SCAQMD HRA chemical specific limits shown in the table.

INF = Vapor phase GAC influent. VOC-laden vapor sample collected at the influent to the lead vapor GAC unit.

INT = Vapor phase GAC intermediate. Partially treated vapor sample collected between the lead and lag vapor GAC units.

EFF = Vapor phase GAC effluent. Fully treated vapor sample collected at the effluent from lag (polishing) vapor GAC unit.

VGAC = vapor phase granular activated carbon; GAC = granular activated carbon

SCAQMD HRA Limit = South Coast Air Quality Management District Health Risk Assessment permitted concentration limit in ppbv

U = not detected above reporting limit listed

PCE = Tetrachloroethene; TCE = Trichloroethene; 1,1-DCA = 1,1-Dichloroethane; 1,2-DCA = 1,2-Dichloroethane; BZ = Benzene; MeCl = Methylene chloride; VC = Vinyl chloride; CFM = Chloroform

# **FIGURES**



- ◆ GCR Extraction Well
- Observation Well / Piezometer
- OU-1 On-Site Soil Remedy Dual Phase Extraction Well
- ~~~~ GCR Conveyance Piping
- GWTP Compound Location

- Former Omega Chemical Property Boundary
- OU-1 Boundary

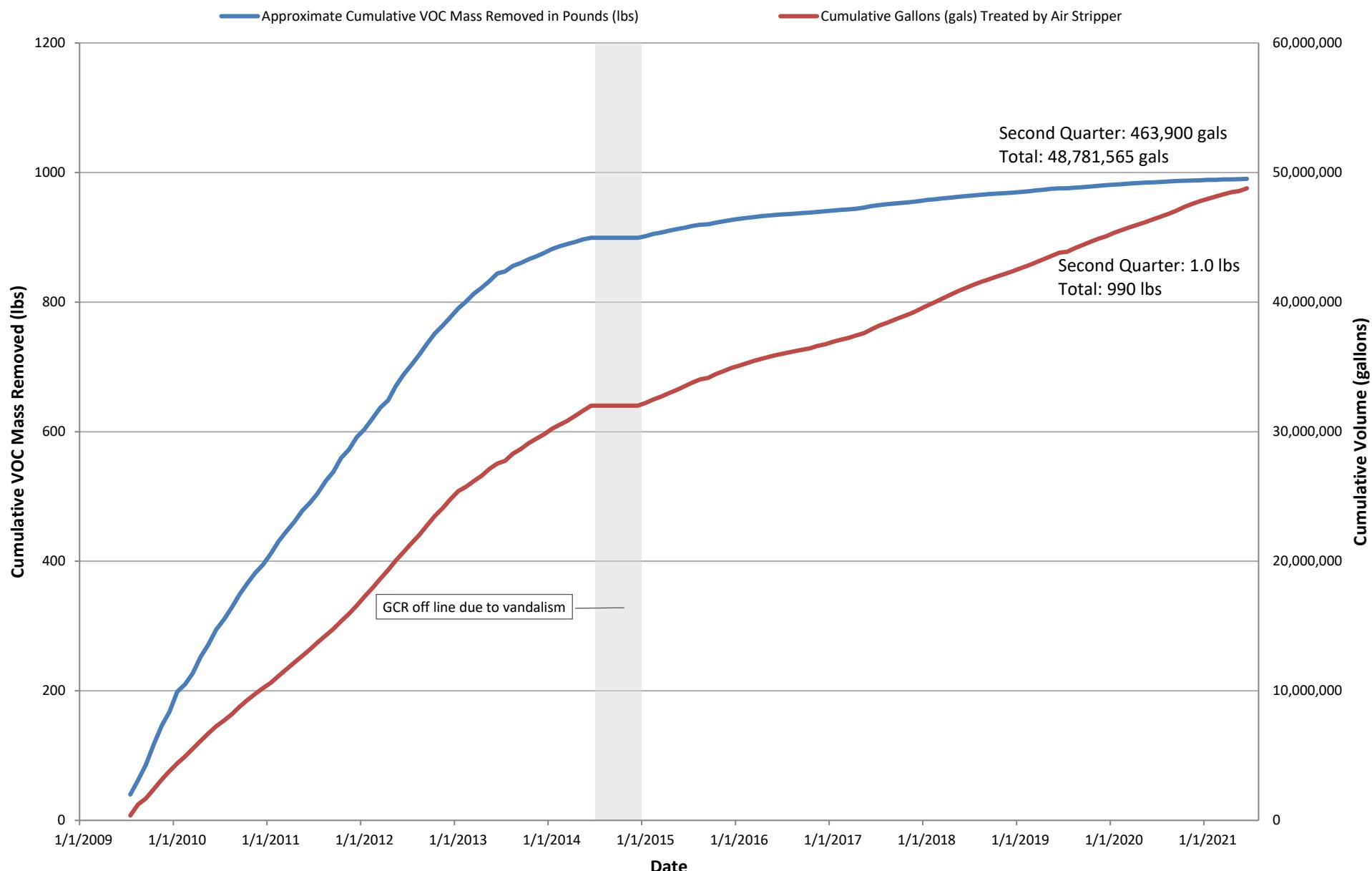
Extraction from VE-7D was terminated on February 11, 2020. The pump will remain off as the value of extraction at this location is limited. Only piezometric data are collected from PZ-3 for GCR performance monitoring.



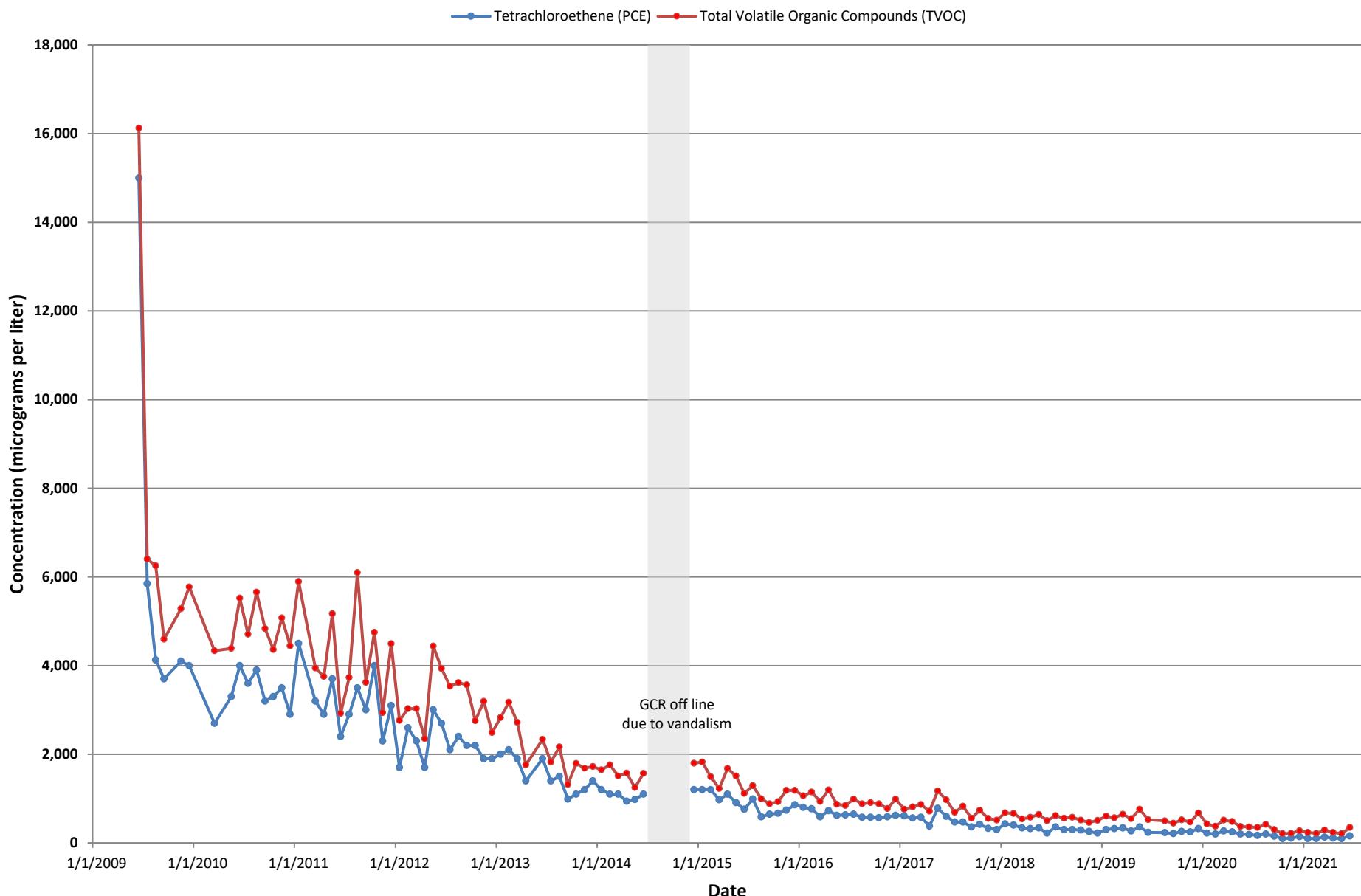
Reviewed By: KRK  
Drawn By: LEM  
Date: 10/27/2020

**Figure 1**  
**OU-1 Location Map**  
**OU-1 Groundwater Containment Remedy,**  
**Omega Chemical Superfund Site**  
**12504/12512 East Whittier Boulevard**  
**Whittier, California**

**Figure 2**  
**Cumulative Gallons Treated and Mass Removed**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**Second Quarter 2021**



**Figure 3**  
**GCR Air Stripper Influent Concentrations**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**Second Quarter 2021**



## **ATTACHMENT A**

### **Operational Data Summaries**

**Attachment A, Table A-1**  
**Hydraulic Containment Extraction Well Operational Summary**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**Second Quarter 2021**

		Pump Runtime (hrs)	Total Volume Extracted (gal)	Operational Flow Rate <sup>1</sup> (gpm)	Average Flow Rate <sup>2</sup> (gpm)
EW-1	April 2021	0	0	0	0
	May 2021	0	0	0	0
	June 2021	0	0	0	0
	2nd Quarter 2021	0	0	0	0
EW-2	April 2021	0	0	0	0
	May 2021	0	0	0	0
	June 2021	0	0	0	0
	2nd Quarter 2021	0	0	0	0
EW-3	April 2021	10.2	1215	1.98	0.03
	May 2021	1.12	91.7	1.36	0.002
	June 2021	3.20	585	3.05	0.01
	2nd Quarter 2021	14.5	1,892	2.13	0.01
EW-4	April 2021	4.11	1,515	6.14	0.04
	May 2021	3.08	722	3.91	0.02
	June 2021	2.44	1,228	8.39	0.03
	2nd Quarter 2021	9.63	3,465	6.15	0.03
EW-5	April 2021	17.4	5,572	5.35	0.13
	May 2021	13.3	2,710	3.39	0.06
	June 2021	11.5	5,045	7.29	0.12
	2nd Quarter 2021	42.2	13,328	5.34	0.10

Notes:

1. Operational flow rate calculated from total gallons processed in the month and hours the pump actually operated in the month.

2. Average flow rate is calculated from total gallons processed in the month and total hours in the month, regardless of pump uptime.

All extraction wells operate on/off based on water levels measured by pressure transducers installed in each well.

hrs = hours

gpm = gallons per minute

gal = gallons

lbs = pounds

**Attachment A, Table A-2**  
**Vapor Phase GAC Operational Data Demonstrating Substantive Compliance with SCAQMD Regulations**  
**Second Quarter 2021**

SCAQMD Limit		1000	145			3.6		
HRA Changeout Criteria					12 <sup>3</sup>		90 <sup>3</sup>	
Date	Influent Vapor Relative Humidity (%)	Influent Vapor Flow Rate (SCFM)	Influent Vapor Temperature (°F)	Influent PID Measurement (ppmv)	Intermediate PID Measurement (ppmv)	Effluent PID Measurement (ppmv)	Lead VGAC Efficiency <sup>1</sup> (%)	Overall VGAC Efficiency <sup>2</sup> (%)
4/6/2021	N/A <sup>4</sup>	625	101.5	0.396	0.256	1.162	---	---
4/13/2021	N/A <sup>4</sup>	613	101.4	0.000	0.000	0.000	---	---
4/20/2021	N/A <sup>4</sup>	634	101.4	0.147	0.000	0.417	---	---
4/28/2021	N/A <sup>4</sup>	632	102.8	0.263	0.371	1.293	---	---
5/3/2021	N/A <sup>4</sup>	706	111.9	0.000	0.000	0.270	---	---
5/10/2021	N/A <sup>4</sup>	676	112.2	0.000	0.000	0.380	---	---
5/17/2021	N/A <sup>4</sup>	690	110.9	0.000	0.000	0.951	---	---
5/24/2021	N/A <sup>4</sup>	685	107.6	0.000	0.009	1.285	---	---
6/2/2021	N/A <sup>4</sup>	700	106.9	0.413	0.118	2.101	---	---
6/7/2021	33.7	696	113.6	0.205	0.068	0.507	---	---
6/14/2021	34.6	701	116.5	0.000	0.000	0.364	---	---
6/22/2021	35.0	715	113.1	0.000	0.000	0.018	---	---
6/29/2021	35.2	709	114.3	0.181	0.022	0.078	---	---
<b>2nd Quarter 2021</b>	<b>34.6</b>	<b>676</b>	<b>108.8</b>	<b>0.123</b>	<b>0.065</b>	<b>0.679</b>	---	---
<b>Compliance with SCAQMD Limits?</b>		<b>YES</b>	<b>YES</b>			<b>YES</b>		
<b>Carbon changeout required this period?</b>					<b>NO</b>		<b>NO</b>	

Notes:

°F = degrees Fahrenheit

SCFM = Standard Cubic Feet per Minute

PID = photoionization detector

VGAC = vapor phase granular activated carbon

GAC = granular activated carbon

ppmv = parts per million by volume as hexane

SCAQMD HRA = South Coast Air Quality Management District Health Risk Assessment

N/A = not applicable

1. Lead VGAC efficiency is calculated by the PID readings between the influent and intermediate. The lead VGAC efficiency is only calculated if the influent and midpoint PID readings exceed 12 ppmv as hexane, see Note 3.
2. Overall VGAC efficiency is calculated by the PID readings between the influent and effluent. The overall VGAC efficiency is only calculated if the influent and effluent PID readings exceed 12 ppmv as hexane, see Note 3.
3. Carbon changeouts are required when the efficiency across the lead VGAC vessel drops below 90% AND the midpoint concentration exceeds 12 ppmv as hexane, by PID during the same sampling event.
4. The relative humidity sensor was malfunctioning and was replaced on June 7, 2021.

## Kyle King

---

**From:** Day, Maria L. <dayml@cdmsmith.com>  
**Sent:** Thursday, July 29, 2021 3:40 PM  
**To:** Kyle King; clucas@ddmsinc.com  
**Cc:** Reed, Alesandra F.; kmcgill@ddmsinc.com  
**Subject:** OMEGA GWCS April 2021 GAC Summary  
**Attachments:** Omega GWCS GAC Assessment\_April 2021.xlsx

**\*\* WARNING EXTERNAL SENDER \*\***

Team,

We evaluated the performance of the GAC used by the GWCS for the month of April 2021, relative to the conditions listed in the Health Risk Assessment (HRA) (CDM Smith 2015). These conditions must be met to remain in substantive compliance with SCAQMD requirements.

During the month of April, the GWCS system met the conditions presented in the HRA and is therefore substantively compliant:

- None of the toxic air contaminants listed in Condition #14 of the HRA were detected in the effluent above their respective effluent limit except methyl ethyl ketone (MEK) (see table below). While the MEK concentration at the effluent did exceed the discharge limit modeled in the 2015 HRA, the effluent concentration does not result in the overall acute health index (HIA) exceeding 1, and therefore the system remains substantively compliant.
- The GWCS did not meet the two criteria for replacement of the lead GAC vessel (listed under Condition #12 of the HRA), and therefore no GAC replacement was required.
- No other carcinogenic air contaminants beyond those listed in Condition #14 of the HRA were detected in effluent above 10 ppbv, and therefore per Condition #16, no toxic risk assessment was required.

We also evaluated all the analytical and PID data and, based on our professional judgement, we do not recommend a voluntary changeout of the lead vessel GAC at this time.

GWCS GAC Assessment - Based on Samples Collected April 6, 2021					
Parameter	Concentration (ppbv)				Below 2015 HRA Limit?
	Influent	Midpoint	Effluent	HRA Effluent Limit	
1,1,1-Trichloroethane (TCA)	ND	ND	ND	3	Yes
1,1-Dichloroethane	ND	ND	ND	18	Yes
1,1-Dichloroethene	5.6	5.3	1	140	Yes
1,2-Dichloroethane	ND	ND	ND	12	Yes
Benzene	ND	ND	ND	12	Yes
Carbon disulfide	ND	ND	ND	690	Yes
Chloroform	1.5	ND	ND	95	Yes
Freon 11	2.6	2.8	2.4	4200	Yes
Freon 113	13	ND	ND	510	Yes
Freon 12	ND	ND	ND	249	Yes

Isopropyl Alcohol (Isopropanol)	5.2	3.7	5.8	29	Yes
o-Xylene	ND	ND	ND	3	Yes
Methyl ethyl ketone	ND	ND	190	24	No
Methylene chloride	ND	ND	ND	6900	Yes
Tetrachloroethene (PCE)	25	ND	ND	28	Yes
TNMOC ref. to Heptane (MW=100)	73	ND	550	4177	Yes
Toluene	ND	ND	ND	42	Yes
Trichloroethene (TCE)	4	ND	ND	12	Yes
Vinyl chloride	ND	ND	ND	230	Yes

Please let us know if there are any questions or if you would like to discuss the data further. Have a great day.

**Maria Day**

CDM Smith

555 17<sup>th</sup> St., Suite 500, Denver, CO 80202

Office: 303.383.2380

Cell: 303.913.8864

[dayml@cdmsmith.com](mailto:dayml@cdmsmith.com)

## Kyle King

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**From:** Day, Maria L. <dayml@cdmssmith.com>  
**Sent:** Thursday, July 29, 2021 3:43 PM  
**To:** Kyle King; clucas@ddmsinc.com  
**Cc:** Reed, Alesandra F.; kmcgill@ddmsinc.com  
**Subject:** OMEGA GWCS May 2021 GAC Summary  
**Attachments:** Omega GWCS GAC Assessment\_May 2021.xlsx

**\*\* WARNING EXTERNAL SENDER \*\***

Team,

We evaluated the performance of the GAC used by the GWCS for the month of May 2021, relative to the conditions listed in the Health Risk Assessment (HRA) (CDM Smith 2015). These conditions must be met to remain in substantive compliance with SCAQMD requirements.

During the month of May, the GWCS system met the conditions presented in the HRA and is therefore substantively compliant:

- None of the toxic air contaminants listed in Condition #14 of the HRA were detected in the effluent above their respective effluent limit except methyl ethyl ketone (MEK) (see table below). While the MEK concentration at the effluent did exceed the discharge limit modeled in the 2015 HRA, the effluent concentration does not result in the overall acute health index (HIA) exceeding 1, and therefore the system remains substantively compliant.
- The GWCS did not meet the two criteria for replacement of the lead GAC vessel (listed under Condition #12 of the HRA), and therefore no GAC replacement was required.
- No other carcinogenic air contaminants beyond those listed in Condition #14 of the HRA were detected in effluent above 10 ppbv, and therefore per Condition #16, no toxic risk assessment was required.

We also evaluated all the analytical and PID data and, based on our professional judgement, we do not recommend a voluntary changeout of the lead vessel GAC at this time.

GWCS GAC Assessment - Based on Samples Collected May 3, 2021					
Parameter	Concentration (ppbv)				Below 2015 HRA Limit?
	Influent	Midpoint	Effluent	HRA Effluent Limit	
1,1,1-Trichloroethane (TCA)	ND	ND	ND	3	Yes
1,1-Dichloroethane	ND	ND	ND	18	Yes
1,1-Dichloroethene	4	5.5	1.6	140	Yes
1,2-Dichloroethane	ND	ND	ND	12	Yes
Benzene	ND	ND	ND	12	Yes
Carbon disulfide	ND	ND	ND	690	Yes
Chloroform	1.6	ND	ND	95	Yes
Freon 11	2.4	3	2.8	4200	Yes
Freon 113	12	ND	ND	510	Yes
Freon 12	ND	ND	ND	249	Yes
Isopropyl Alcohol (Isopropanol)	9.3	ND	21	29	Yes

<i>o</i> -Xylene	ND	ND	ND	3	Yes
Methyl ethyl ketone	ND	ND	490	24	No
Methylene chloride	ND	ND	ND	6900	Yes
Tetrachloroethene (PCE)	23	ND	ND	28	Yes
TNMOC ref. to Heptane (MW=100)	130	48	1200	4177	Yes
Toluene	ND	ND	ND	42	Yes
Trichloroethene (TCE)	3.7	ND	ND	12	Yes
Vinyl chloride	ND	ND	ND	230	Yes

Please let us know if there are any questions or if you would like to discuss the data further. Have a great day.

**Maria Day**

CDM Smith

555 17<sup>th</sup> St., Suite 500, Denver, CO 80202

Office: 303.383.2380

Cell: 303.913.8864

[dayml@cdmsmith.com](mailto:dayml@cdmsmith.com)

## Kyle King

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**From:** Day, Maria L. <dayml@cdmsmith.com>  
**Sent:** Thursday, July 29, 2021 3:54 PM  
**To:** clucas@ddmsinc.com; Kyle King  
**Cc:** Reed, Alesandra F.; kmcgill@ddmsinc.com  
**Subject:** OMEGA GWCS June 2021 GAC Summary  
**Attachments:** Omega GWCS GAC Assessment\_June2021.xlsx

**\*\* WARNING EXTERNAL SENDER \*\***

Team,

We evaluated the performance of the GAC used by the GWCS for the month of June 2021, relative to the conditions listed in the Health Risk Assessment (HRA) (CDM Smith 2015). These conditions must be met to remain in substantive compliance with SCAQMD requirements.

During the month of June, the GWCS system met the conditions presented in the HRA and is therefore substantively compliant:

- None of the toxic air contaminants listed in Condition #14 of the HRA were detected in the effluent above their respective effluent limit except methyl ethyl ketone (MEK) (see table below). While the MEK concentration at the effluent did exceed the discharge limit modeled in the 2015 HRA, the effluent concentration does not result in the overall acute health index (HIA) exceeding 1, and therefore the system remains substantively compliant.
- The GWCS did not meet the two criteria for replacement of the lead GAC vessel (listed under Condition #12 of the HRA), and therefore no GAC replacement was required.
- No other carcinogenic air contaminants beyond those listed in Condition #14 of the HRA were detected in effluent above 10 ppbv, and therefore per Condition #16, no toxic risk assessment was required.

We also evaluated all the analytical and PID data and, based on our professional judgement, we do not recommend a voluntary changeout of the lead vessel GAC at this time.

GWCS GAC Assessment - Based on Samples Collected June 2, 2021					
Parameter	Concentration (ppbv)				Below 2015 HRA Limit?
	Influent	Midpoint	Effluent	HRA Effluent Limit	
1,1,1-Trichloroethane (TCA)	ND	ND	ND	3	Yes
1,1-Dichloroethane	ND	ND	ND	18	Yes
1,1-Dichloroethene	4.6	5.6	1.5	140	Yes
1,2-Dichloroethane	ND	ND	ND	12	Yes
Benzene	ND	ND	ND	12	Yes
Carbon disulfide	18	ND	ND	690	Yes
Chloroform	2.2	ND	ND	95	Yes
Freon 11	2.5	3	2.4	4200	Yes
Freon 113	21	ND	ND	510	Yes
Freon 12	ND	ND	ND	249	Yes

Isopropyl Alcohol (Isopropanol)	5.3	4.7	9.2	29	Yes
o-Xylene	ND	ND	ND	3	Yes
Methyl ethyl ketone	ND	ND	430	24	No
Methylene chloride	ND	ND	ND	6900	Yes
Tetrachloroethene (PCE)	30	ND	ND	28	Yes
TNMOC ref. to Heptane (MW=100)	100	22	1300	4177	Yes
Toluene	ND	ND	ND	42	Yes
Trichloroethene (TCE)	4.6	ND	ND	12	Yes
Vinyl chloride	ND	ND	ND	230	Yes

Please let us know if there are any questions or if you would like to discuss the data further. Have a great day.

**Maria Day**

CDM Smith

555 17<sup>th</sup> St., Suite 500, Denver, CO 80202

Office: 303.383.2380

Cell: 303.913.8864

[dayml@cdmsmith.com](mailto:dayml@cdmsmith.com)

## **ATTACHMENT B**

**Other Data Collected This Quarter**



■ OU-1 On-Site Soil Remedy  
 Dual Phase Extraction Well  
● Observation Well/Piezometer

■ Former Omega Chemical  
 Property Boundary

■ OU-1 Boundary

Extraction from VE-7D was terminated on February 11, 2020.  
 The pump will remain off as the value of extraction at this location is limited.



Reviewed By: BAR  
 Drawn By: KM  
 Date: 7/12/2021

**Attachment B, Figure B-1**  
**Other Groundwater Data Locations**  
**Omega Chemical Superfund Site**

0 50 100 200 Feet

**Attachment B, Table B-1**  
**Other Groundwater Elevation Data Collected This Quarter**  
**Omega Chemical Superfund Site**  
**Second Quarter 2021**

Well No.	Top of Casing Elevation (feet MSL)	Screen Interval (feet MSL)	Date	Depth To Water (feet btoc)	Groundwater Elevation (feet MSL)
PZ-9	195.75	105.75 - 125.75	4/12/2021	83.43	112.32
OW11	200.06	100.06 - 120.06	4/16/2021	86.15	113.91
OW13B	210.89	70.89 - 80.89	4/23/2021	98.05	112.84
DPE-3	206.76	106.76 - 166.76	4/16/2021	87.40	119.36
DPE-4	202.97	102.97 - 162.97	4/12/2021	89.13	113.84
DPE-5	201.77	101.77 - 161.77	4/23/2021	82.83	118.94
DPE-8	204.87	104.87 - 164.87	4/16/2021	84.00	120.87
DPE-9	199.06	99.06 - 159.06	4/13/2021	90.81	108.25
VE-7D	200.11	100.11 - 160.11	4/16/2021	85.98	114.13
VE-10D	198.80	98.80 - 158.80	4/13/2021	94.57	104.23

Notes:

Elevation data per California Coordinate System NADV88

btoc = below top of casing

MSL = mean sea level

All depths to water shown are based on hand measurements.

**Attachment B, Table B-2**  
**Other Groundwater Pumping Data Collected This Quarter**  
**Omega Chemical Superfund Site**  
**Second Quarter 2021**

		Pump Runtime (hrs)	Total Volume Extracted (gal)	Operational Flow Rate <sup>1</sup> (gpm)	Average Flow Rate <sup>2</sup> (gpm)
DPE-3	April 2021	89.4	16,986	3.17	0.39
	May 2021	81.1	9,743	2.00	0.22
	June 2021	89.5	22,419	4.17	0.52
	2nd Quarter 2021	260	49,147	3.11	0.38
DPE-4	April 2021	113	26,116	3.86	0.60
	May 2021	98.4	14,403	2.44	0.32
	June 2021	132	36,820	4.66	0.85
	2nd Quarter 2021	343	77,340	3.65	0.59
DPE-5	April 2021	21.8	4,751	3.63	0.11
	May 2021	2.50	339	2.26	0.01
	June 2021	2.70	810	5.00	0.02
	2nd Quarter 2021	27.0	5,900	3.63	0.05
DPE-8	April 2021	226	25,534	1.89	0.59
	May 2021	200	15,025	1.25	0.34
	June 2021	223	40,115	3.00	0.93
	2nd Quarter 2021	648	80,674	2.05	0.62
DPE-9	April 2021	231	57,807	4.17	1.34
	May 2021	240	37,287	2.59	0.84
	June 2021	257	85,708	5.56	1.98
	2nd Quarter 2021	728	180,802	4.11	1.39
VE-10D	April 2021	94.5	18,904	3.33	0.44
	May 2021	92.9	11,878	2.13	0.27
	June 2021	78.8	20,566	4.35	0.48
	2nd Quarter 2021	266	51,348	3.27	0.39

Notes:

1. Operational flow rate calculated from total gallons processed in the month and hours the pump actually operated in the month.
2. Average flow rate is calculated from total gallons processed in the month and total hours in the month, regardless of pump uptime.

All extraction wells operate on/off based on water levels measured by pressure transducers installed in each well.

hrs = hours

gal = gallons

gpm = gallons per minute

lbs = pounds

## **ATTACHMENT C**

**Laboratory Analytical Results  
and Data Verification Reports**

**Data Quality Assessment**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**Second Quarter 2021**

Sampling Event	Sampling Rationale	Frequency of Analysis	Matrix	Lab WO#	Sampling Date	Field Quality Control Samples	Data Review Level	Review of Laboratory QC Samples	Data Usability
<b>GWTS Process Sampling</b>									
<i>SCAQMD Compliance</i>									
Q2	Sampling of the influent, intermediate, and effluent sample ports of the VPGAC vessels is required monthly for the SCAQMD permit.	Monthly	Air	2104188 2105075 2106173	4/6/2021 5/3/2021 6/2/2021	Equipment blanks are not needed as sampling equipment is not used to collect the vapor samples. Trip blanks are not typically submitted with Summa canisters. Field duplicates are not needed for this compliance sampling.	Stage 2A	MB, LCS/LCSD, surrogates	TNMOC results were not validated. No qualification of sample results was warranted.  TNMOC results were not validated. The laboratory applied an "E" qualifer to the methyl ethyl ketone results in OC_VGAC_EFF_SP242_050321 to indicate that they exceeded the calibration range. The validator replaced the "E" qualifier with a "J". No other qualification of sample results was warranted.  TNMOC results were not validated. The laboratory applied an "E" qualifer to the methyl ethyl ketone results in OC_VGAC_EFF_SP242_060221 to indicate that they exceeded the calibration range. The validator replaced the "E" qualifier with a "J". No other qualification of sample results was warranted.
<i>Treatment System Process Sampling</i>									
Q2	Analysis of the influent and effluent samples (before and after the air stripper) from the GWTS are needed to assess the performance of the treatment equipment.	Monthly (monthly for the first year of operation for the influent sample, frequency may change after 1st year); monthly for effluent sample.	Water	281561 282663 284202	4/6/2021 5/3/2021 6/2/2021	Equipment blanks are not needed as sampling equipment is not used to collect these samples from the sample ports. Field duplicates are not needed for this treatment assessment sampling. Trip blanks were analyzed with these samples and all trip blank results were nondetect.	Stage 2A	MB, LCS/LCSD, MS/MSD, surrogates	The result for 1,4-dioxane in OC_SP220B_EFF_040621 was qualified as estimated (J-) with potential low bias due to low recoveries in the LCS and LCSD.  The result for 1,4-dioxane in OC_SP220B_EFF_050321 was qualified as estimated (J-) with potential low bias due to low recoveries in the LCS and LCSD.  No results required qualification as a result of this review.

**Data Quality Assessment**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**Second Quarter 2021**

Sampling Event	Sampling Rationale	Frequency of Analysis	Matrix	Lab WO#	Sampling Date	Field Quality Control Samples	Data Review Level	Review of Laboratory QC Samples	Data Usability
<b>SDLAC Quarterly Sampling</b>									
Q2	Quarterly sampling of the treatment plant effluent is required per Los Angeles County Sanitation District Industrial Waste Discharge Permit Number 20039.	Quarterly	Water	440-282833-1	5/6/2021	Equipment blanks are not needed as sampling equipment is not used. Field duplicates are not needed for this compliance sampling.	Stage 2A	MB, LCS/LCSD, MS/MSD, surrogates	Results for pH and dissolved sulfide in the laboratory analyses were qualified as estimated (J,UJ) due to holding time excursions. These parameters are 'analyze immediately' parameters. Field measurements should be used. Results for the following compounds in GRAB were qualified as estimated (J, UJ) due to unacceptable recoveries in the LCS and/or LCSD and/or high LCS/LCSD RPD: 1,4-dioxane, hexachlorocyclopentadiene, benzidine, and hexachlorobutadiene. The laboratory reported results for 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, hexachlorobutadiene, and naphthalene from SW-846 Methods 8260B and 8270C and indicated the results from both methods as reportable. Based on professional judgment, the results for these compounds should be taken from the SW-846 Method 8260B as these results are more reliable and have lower reporting limits. No other qualification of sample results was warranted.

4/15/2021  
Ms. Jaime Dinello  
DeMaximis, Inc  
1340 Reynolds Ave, Suite 105

Irvine CA 92614

Project Name: Omega-GWCS Monthly GAC  
Project #:  
Workorder #: 2104188

Dear Ms. Jaime Dinello

The following report includes the data for the above referenced project for sample(s) received on 4/8/2021 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Jade White at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Jade White

Project Manager

**WORK ORDER #:** 2104188

## Work Order Summary

<b>CLIENT:</b>	Ms. Jaime Dinello DeMaximis, Inc 1340 Reynolds Ave, Suite 105 Irvine, CA 92614	<b>BILL TO:</b>	Mr. Tom Dorsey Omega Chemical Site Environmental Remediation Trust 1322 Scott St. Suite 104
<b>PHONE:</b>	949.679.9290	<b>P.O. #</b>	
<b>FAX:</b>	949.679.9078	<b>PROJECT #</b>	Omega-GWCS Monthly GAC
<b>DATE RECEIVED:</b>	04/08/2021	<b>CONTACT:</b>	Jade White
<b>DATE COMPLETED:</b>	04/15/2021		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	OC_VGAC_EFF_SP242_040621	TO-15	4.9 "Hg	10.1 psi
02A	OC_VGAC_INT_SP245_040621	TO-15	2.2 "Hg	9.9 psi
03A	OC_VGAC_INF_SP241_040621	TO-15	5.7 "Hg	9.9 psi
04A	Lab Blank	TO-15	NA	NA
05A	CCV	TO-15	NA	NA
06A	LCS	TO-15	NA	NA
06AA	LCSD	TO-15	NA	NA

CERTIFIED BY:



DATE: 04/15/21

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209220, NJ NELAP - CA016,  
NY NELAP - 11291, TX NELAP - T104704434-20-16, UT NELAP – CA009332020-12, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-014, Effective date: 10/18/2020, Expiration date: 10/17/2021.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

*This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.*

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

**LABORATORY NARRATIVE  
EPA Method TO-15  
DeMaximis, Inc  
Workorder# 2104188**

Three 1 Liter Summa Canister samples were received on April 08, 2021. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

**Receiving Notes**

The Chain of Custody (COC) was not relinquished properly. A date and time was not provided by the field sampler.

**Analytical Notes**

The TNMOC concentration was calculated by taking the total area counts in the sample and quantitating the area based on the response factor of TNMOC ref. to Heptane (MW=100).

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



## Air Toxics

### Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: OC\_VGAC\_EFF\_SP242\_040621

Lab ID#: 2104188-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.0	2.4	5.7	13
1,1-Dichloroethene	1.0	1.0	4.0	4.0
2-Propanol	4.0	5.8	9.9	14
Hexane	1.0	2.3	3.6	8.0
2-Butanone (Methyl Ethyl Ketone)	4.0	190	12	570
TNMOC ref. to Heptane (MW=100)	20	550	83	2200

Client Sample ID: OC\_VGAC\_INT\_SP245\_040621

Lab ID#: 2104188-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.90	2.8	5.0	16
1,1-Dichloroethene	0.90	5.3	3.6	21
2-Propanol	3.6	3.7	8.8	9.1

Client Sample ID: OC\_VGAC\_INF\_SP241\_040621

Lab ID#: 2104188-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.0	2.6	5.8	15
Freon 113	1.0	13	7.9	100
1,1-Dichloroethene	1.0	5.6	4.1	22
2-Propanol	4.1	5.2	10	13
Chloroform	1.0	1.5	5.0	7.3
Trichloroethene	1.0	4.0	5.6	21
Tetrachloroethene	1.0	25	7.0	170
TNMOC ref. to Heptane (MW=100)	21	73	85	300



## Air Toxics

**Client Sample ID: OC\_VGAC\_EFF\_SP242\_040621**

**Lab ID#: 2104188-01A**

### EPA METHOD TO-15 GC/MS FULL SCAN

<b>File Name:</b>	<b>3041207</b>	<b>Date of Collection:</b>	<b>4/6/21 10:19:00 AM</b>	
<b>Dil. Factor:</b>	<b>2.02</b>	<b>Date of Analysis:</b>	<b>4/12/21 12:34 PM</b>	
<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	1.0	Not Detected	5.0	Not Detected
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
Freon 11	1.0	2.4	5.7	13
Freon 113	1.0	Not Detected	7.7	Not Detected
1,1-Dichloroethene	1.0	1.0	4.0	4.0
2-Propanol	4.0	5.8	9.9	14
Carbon Disulfide	4.0	Not Detected	12	Not Detected
Methylene Chloride	10	Not Detected	35	Not Detected
Hexane	1.0	2.3	3.6	8.0
1,1-Dichloroethane	1.0	Not Detected	4.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.0	190	12	570
Chloroform	1.0	Not Detected	4.9	Not Detected
1,1,1-Trichloroethane	1.0	Not Detected	5.5	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.4	Not Detected
Benzene	1.0	Not Detected	3.2	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.1	Not Detected
Trichloroethene	1.0	Not Detected	5.4	Not Detected
1,4-Dioxane	4.0	Not Detected	14	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.5	Not Detected
Tetrachloroethene	1.0	Not Detected	6.8	Not Detected
o-Xylene	1.0	Not Detected	4.4	Not Detected
TNMOC ref. to Heptane (MW=100)	20	550	83	2200

**Container Type: 1 Liter Summa Canister**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	103	70-130



## Air Toxics

Client Sample ID: OC\_VGAC\_INT\_SP245\_040621

Lab ID#: 2104188-02A

### EPA METHOD TO-15 GC/MS FULL SCAN

<b>File Name:</b>	<b>3041208</b>	<b>Date of Collection: 4/6/21 10:18:00 AM</b>		
<b>Dil. Factor:</b>	<b>1.80</b>	<b>Date of Analysis: 4/12/21 01:04 PM</b>		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.90	Not Detected	4.4	Not Detected
Vinyl Chloride	0.90	Not Detected	2.3	Not Detected
Freon 11	0.90	2.8	5.0	16
Freon 113	0.90	Not Detected	6.9	Not Detected
1,1-Dichloroethene	0.90	5.3	3.6	21
2-Propanol	3.6	3.7	8.8	9.1
Carbon Disulfide	3.6	Not Detected	11	Not Detected
Methylene Chloride	9.0	Not Detected	31	Not Detected
Hexane	0.90	Not Detected	3.2	Not Detected
1,1-Dichloroethane	0.90	Not Detected	3.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.6	Not Detected	11	Not Detected
Chloroform	0.90	Not Detected	4.4	Not Detected
1,1,1-Trichloroethane	0.90	Not Detected	4.9	Not Detected
Carbon Tetrachloride	0.90	Not Detected	5.7	Not Detected
Benzene	0.90	Not Detected	2.9	Not Detected
1,2-Dichloroethane	0.90	Not Detected	3.6	Not Detected
Trichloroethene	0.90	Not Detected	4.8	Not Detected
1,4-Dioxane	3.6	Not Detected	13	Not Detected
Toluene	0.90	Not Detected	3.4	Not Detected
1,1,2-Trichloroethane	0.90	Not Detected	4.9	Not Detected
Tetrachloroethene	0.90	Not Detected	6.1	Not Detected
o-Xylene	0.90	Not Detected	3.9	Not Detected
TNMOC ref. to Heptane (MW=100)	18	Not Detected	74	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	102	70-130



## Air Toxics

**Client Sample ID: OC\_VGAC\_INF\_SP241\_040621**

**Lab ID#: 2104188-03A**

### EPA METHOD TO-15 GC/MS FULL SCAN

<b>File Name:</b>	<b>3041209</b>	<b>Date of Collection:</b>	<b>4/6/21 10:18:00 AM</b>	
<b>Dil. Factor:</b>	<b>2.07</b>	<b>Date of Analysis:</b>	<b>4/12/21 01:33 PM</b>	
<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	1.0	Not Detected	5.1	Not Detected
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
Freon 11	1.0	2.6	5.8	15
Freon 113	1.0	13	7.9	100
1,1-Dichloroethene	1.0	5.6	4.1	22
2-Propanol	4.1	5.2	10	13
Carbon Disulfide	4.1	Not Detected	13	Not Detected
Methylene Chloride	10	Not Detected	36	Not Detected
Hexane	1.0	Not Detected	3.6	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.1	Not Detected	12	Not Detected
Chloroform	1.0	1.5	5.0	7.3
1,1,1-Trichloroethane	1.0	Not Detected	5.6	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.5	Not Detected
Benzene	1.0	Not Detected	3.3	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.2	Not Detected
Trichloroethene	1.0	4.0	5.6	21
1,4-Dioxane	4.1	Not Detected	15	Not Detected
Toluene	1.0	Not Detected	3.9	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.6	Not Detected
Tetrachloroethene	1.0	25	7.0	170
o-Xylene	1.0	Not Detected	4.5	Not Detected
TNMOC ref. to Heptane (MW=100)	21	73	85	300

**Container Type: 1 Liter Summa Canister**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	102	70-130



## Air Toxics

**Client Sample ID: Lab Blank**

**Lab ID#: 2104188-04A**

### EPA METHOD TO-15 GC/MS FULL SCAN

<b>File Name:</b>	<b>3041206a</b>	<b>Date of Collection:</b> NA		
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 4/12/21 11:26 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TNMOC ref. to Heptane (MW=100)	10	Not Detected	41	Not Detected

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	101	70-130



## Air Toxics

Client Sample ID: CCV

Lab ID#: 2104188-05A

### EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3041202	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/12/21 08:51 AM

Compound	%Recovery
Freon 12	110
Vinyl Chloride	104
Freon 11	109
Freon 113	109
1,1-Dichloroethene	108
2-Propanol	95
Carbon Disulfide	103
Methylene Chloride	94
Hexane	97
1,1-Dichloroethane	101
2-Butanone (Methyl Ethyl Ketone)	100
Chloroform	106
1,1,1-Trichloroethane	102
Carbon Tetrachloride	107
Benzene	97
1,2-Dichloroethane	109
Trichloroethene	104
1,4-Dioxane	102
Toluene	98
1,1,2-Trichloroethane	102
Tetrachloroethene	107
o-Xylene	100
TNMOC ref. to Heptane (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	107	70-130



## Air Toxics

Client Sample ID: LCS

Lab ID#: 2104188-06A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3041203	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/12/21 09:18 AM
Compound	%Recovery	Method	Limits
Freon 12	109	70-130	
Vinyl Chloride	104	70-130	
Freon 11	111	70-130	
Freon 113	110	70-130	
1,1-Dichloroethene	110	70-130	
2-Propanol	99	70-130	
Carbon Disulfide	103	70-130	
Methylene Chloride	93	70-130	
Hexane	99	70-130	
1,1-Dichloroethane	101	70-130	
2-Butanone (Methyl Ethyl Ketone)	100	70-130	
Chloroform	106	70-130	
1,1,1-Trichloroethane	104	70-130	
Carbon Tetrachloride	109	70-130	
Benzene	97	70-130	
1,2-Dichloroethane	107	70-130	
Trichloroethene	103	70-130	
1,4-Dioxane	101	70-130	
Toluene	95	70-130	
1,1,2-Trichloroethane	100	70-130	
Tetrachloroethene	105	70-130	
o-Xylene	100	70-130	
TNMOC ref. to Heptane (MW=100)	Not Spiked		

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method	Limits
Toluene-d8	99	70-130	
1,2-Dichloroethane-d4	98	70-130	
4-Bromofluorobenzene	105	70-130	



## Air Toxics

Client Sample ID: LCSD

Lab ID#: 2104188-06AA

### EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3041204	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/12/21 09:46 AM
Compound	%Recovery	Method	Limits
Freon 12	107	70-130	
Vinyl Chloride	103	70-130	
Freon 11	108	70-130	
Freon 113	110	70-130	
1,1-Dichloroethene	111	70-130	
2-Propanol	98	70-130	
Carbon Disulfide	104	70-130	
Methylene Chloride	93	70-130	
Hexane	99	70-130	
1,1-Dichloroethane	100	70-130	
2-Butanone (Methyl Ethyl Ketone)	101	70-130	
Chloroform	104	70-130	
1,1,1-Trichloroethane	102	70-130	
Carbon Tetrachloride	106	70-130	
Benzene	98	70-130	
1,2-Dichloroethane	105	70-130	
Trichloroethene	103	70-130	
1,4-Dioxane	100	70-130	
Toluene	94	70-130	
1,1,2-Trichloroethane	102	70-130	
Tetrachloroethene	106	70-130	
o-Xylene	101	70-130	
TNMOC ref. to Heptane (MW=100)	Not Spiked		

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method	Limits
Toluene-d8	100	70-130	
1,2-Dichloroethane-d4	98	70-130	
4-Bromofluorobenzene	106	70-130	

2104188

**Cascience  
Environmental  
Laboratories, Inc.**

7440 LINCOLN WAY  
GARDEN GROVE, CA 92841-1427  
TEL: (714) 895-6484, FAX: (714) 894-7601

LABORATORY CLIENT: <b>de maximis</b>	ADDRESS: 1322 Scott St., Suite 104	STATE: CA	ZIP: 92106	CLIENT PROJECT NAME NUMBER: <b>Omega - GMCS Monthly GAC</b>	P.O. NO.:
CITY: <b>San Diego</b>	STATE: CA	ZIP: 92106	CTRY: Whittier	PROJECT CONTACT: Trent Henderson <a href="mailto:t.henderson@jacobandnefner.com">t.henderson@jacobandnefner.com</a>	AB CONTACT OR QUOTE NO.:
TEL: (562) 758-8149	EMAIL: <a href="mailto:jainete@demaximis.com">jainete@demaximis.com</a>	SAMPLER(S) NAME & SIGNATURE: <b>Khalid Aziz</b>	ZIP: 90602	LAS USE ONLY: <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) <input checked="" type="checkbox"/> EDD			REQUESTED ANALYSES		
SPECIAL INSTRUCTIONS:					

LAB USE ONLY	SAMPLE ID	FIELD ID / Point of Collection	Air Type	Sampling Equipment Info		Start Sampling Information		Stop Sampling Information		TO-15 (TAL 2.3)		
			(S)V Indoor (A) Ambient	Canister ID#	Canister Size (L or mL)	Flow Controller ID#	Date	Time (24hr clock)	Canister Pressure ( <sup>o</sup> F)		Date	Time (24hr clock)
01A	OC_VGAC_EFF_SP242_040621	SP-EFF-GAC	(S)V	1L2460	1L	40978	4/6/2021	1009	-76	4/6/2021	1019	-6
02A	OC_VGAC_INT_SP245_040621	SP-MDGAC	Vapor	1L2093	1L	25413	4/6/2021	1011	-78	4/6/2021	1018	-2
03A	OC_VGAC_INF_SP241_040621	SP-INF-GAC	Vapor	1L2986	1L	24579	4/6/2021	1012	-27	4/6/2021	1015	-5
4												
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6												
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14												
15												
REMARKS:			Received By: (Signature)	Date:	Time:	Received By: (Signature)			Date:	Time:		
REMARKS:			Received By: (Signature)	Date:	Time:	Received By: (Signature)			Date:	Time:		

5/18/2021  
Ms. Jaime Dinello  
DeMaximis, Inc  
1340 Reynolds Ave, Suite 105

Irvine CA 92614

Project Name: Omega - GWCS Monthly GAC  
Project #:  
Workorder #: 2105075

Dear Ms. Jaime Dinello

The following report includes the data for the above referenced project for sample(s) received on 5/5/2021 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kathleen Kaneko at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kathleen Kaneko  
Project Manager

**WORK ORDER #:** **2105075**

## Work Order Summary

<b>CLIENT:</b>	Ms. Jaime Dinello DeMaximis, Inc 1340 Reynolds Ave, Suite 105 Irvine, CA 92614	<b>BILL TO:</b>	Mr. Tom Dorsey Omega Chemical Site Environmental Remediation Trust 1322 Scott St. Suite 104
<b>PHONE:</b>	949.679.9290	<b>P.O. #</b>	
<b>FAX:</b>	949.679.9078	<b>PROJECT #</b>	Omega - GWCS Monthly GAC
<b>DATE RECEIVED:</b>	05/05/2021	<b>CONTACT:</b>	Kathleen Kaneko
<b>DATE COMPLETED:</b>	05/17/2021		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	OC_VGAC_EFF_SP242_050321	TO-15	4.5 "Hg	10 psi
02A	OC_VGAC_INT_SP245_050321	TO-15	4.0 "Hg	10 psi
03A	OC_VGAC_INF_SP241_050321	TO-15	6.0 "Hg	10 psi
04A	Lab Blank	TO-15	NA	NA
05A	CCV	TO-15	NA	NA
06A	LCS	TO-15	NA	NA
06AA	LCSD	TO-15	NA	NA

CERTIFIED BY:



 DATE: 05/17/21

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209220, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-20-16, UT NELAP – CA009332020-12, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-014, Effective date: 10/18/2020, Expiration date: 10/17/2021.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

*This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.*

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

**LABORATORY NARRATIVE  
EPA Method TO-15  
DeMaximis, Inc  
Workorder# 2105075**

Three 1 Liter Silco Canister samples were received on May 05, 2021. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

The TNMOC concentration was calculated by taking the total area counts in the sample and quantitating the area based on the response factor of TNMOC ref. to Heptane (MW=100).

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



## Air Toxics

### Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: OC\_VGAC\_EFF\_SP242\_050321

Lab ID#: 2105075-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.99	2.8	5.6	16
1,1-Dichloroethene	0.99	1.6	3.9	6.2
2-Propanol	4.0	21	9.7	52
Hexane	0.99	5.3	3.5	19
2-Butanone (Methyl Ethyl Ketone)	4.0	490 E	12	1400 E
TNMOC ref. to Heptane (MW=100)	20	1200	81	4900

Client Sample ID: OC\_VGAC\_INT\_SP245\_050321

Lab ID#: 2105075-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.97	3.0	5.4	17
1,1-Dichloroethene	0.97	5.5	3.8	22
TNMOC ref. to Heptane (MW=100)	19	48	79	200

Client Sample ID: OC\_VGAC\_INF\_SP241\_050321

Lab ID#: 2105075-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.0	2.4	5.9	13
Freon 113	1.0	12	8.0	94
1,1-Dichloroethene	1.0	4.0	4.2	16
2-Propanol	4.2	9.3	10	23
Chloroform	1.0	1.6	5.1	7.7
Trichloroethene	1.0	3.7	5.6	20
Tetrachloroethene	1.0	23	7.1	160
TNMOC ref. to Heptane (MW=100)	21	130	86	530



## Air Toxics

Client Sample ID: OC\_VGAC\_EFF\_SP242\_050321

Lab ID#: 2105075-01A

### EPA METHOD TO-15 GC/MS FULL SCAN

<b>File Name:</b>	<b>p050727</b>	<b>Date of Collection: 5/3/21 11:50:00 AM</b>		
<b>Dil. Factor:</b>	<b>1.98</b>	<b>Date of Analysis: 5/8/21 03:36 AM</b>		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.99	Not Detected	4.9	Not Detected
Vinyl Chloride	0.99	Not Detected	2.5	Not Detected
Freon 11	0.99	2.8	5.6	16
Freon 113	0.99	Not Detected	7.6	Not Detected
1,1-Dichloroethene	0.99	1.6	3.9	6.2
2-Propanol	4.0	21	9.7	52
Carbon Disulfide	4.0	Not Detected	12	Not Detected
Methylene Chloride	9.9	Not Detected	34	Not Detected
Hexane	0.99	5.3	3.5	19
1,1-Dichloroethane	0.99	Not Detected	4.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.0	490 E	12	1400 E
Chloroform	0.99	Not Detected	4.8	Not Detected
1,1,1-Trichloroethane	0.99	Not Detected	5.4	Not Detected
Carbon Tetrachloride	0.99	Not Detected	6.2	Not Detected
Benzene	0.99	Not Detected	3.2	Not Detected
1,2-Dichloroethane	0.99	Not Detected	4.0	Not Detected
Trichloroethene	0.99	Not Detected	5.3	Not Detected
1,4-Dioxane	4.0	Not Detected	14	Not Detected
Toluene	0.99	Not Detected	3.7	Not Detected
1,1,2-Trichloroethane	0.99	Not Detected	5.4	Not Detected
Tetrachloroethene	0.99	Not Detected	6.7	Not Detected
o-Xylene	0.99	Not Detected	4.3	Not Detected
TNMOC ref. to Heptane (MW=100)	20	1200	81	4900

E = Exceeds instrument calibration range.

Container Type: 1 Liter Silco Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	102	70-130



## Air Toxics

Client Sample ID: OC\_VGAC\_INT\_SP245\_050321

Lab ID#: 2105075-02A

### EPA METHOD TO-15 GC/MS FULL SCAN

<b>File Name:</b>	<b>p050726</b>	<b>Date of Collection: 5/3/21 12:05:00 PM</b>		
<b>Dil. Factor:</b>	<b>1.94</b>	<b>Date of Analysis: 5/8/21 03:07 AM</b>		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.97	Not Detected	4.8	Not Detected
Vinyl Chloride	0.97	Not Detected	2.5	Not Detected
Freon 11	0.97	3.0	5.4	17
Freon 113	0.97	Not Detected	7.4	Not Detected
1,1-Dichloroethene	0.97	5.5	3.8	22
2-Propanol	3.9	Not Detected	9.5	Not Detected
Carbon Disulfide	3.9	Not Detected	12	Not Detected
Methylene Chloride	9.7	Not Detected	34	Not Detected
Hexane	0.97	Not Detected	3.4	Not Detected
1,1-Dichloroethane	0.97	Not Detected	3.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.9	Not Detected	11	Not Detected
Chloroform	0.97	Not Detected	4.7	Not Detected
1,1,1-Trichloroethane	0.97	Not Detected	5.3	Not Detected
Carbon Tetrachloride	0.97	Not Detected	6.1	Not Detected
Benzene	0.97	Not Detected	3.1	Not Detected
1,2-Dichloroethane	0.97	Not Detected	3.9	Not Detected
Trichloroethene	0.97	Not Detected	5.2	Not Detected
1,4-Dioxane	3.9	Not Detected	14	Not Detected
Toluene	0.97	Not Detected	3.6	Not Detected
1,1,2-Trichloroethane	0.97	Not Detected	5.3	Not Detected
Tetrachloroethene	0.97	Not Detected	6.6	Not Detected
o-Xylene	0.97	Not Detected	4.2	Not Detected
TNMOC ref. to Heptane (MW=100)	19	48	79	200

Container Type: 1 Liter Silco Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	102	70-130



## Air Toxics

Client Sample ID: OC\_VGAC\_INF\_SP241\_050321

Lab ID#: 2105075-03A

### EPA METHOD TO-15 GC/MS FULL SCAN

<b>File Name:</b>	<b>p050725</b>	<b>Date of Collection: 5/3/21 11:37:00 AM</b>		
<b>Dil. Factor:</b>	<b>2.10</b>	<b>Date of Analysis: 5/8/21 02:38 AM</b>		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.2	Not Detected
Vinyl Chloride	1.0	Not Detected	2.7	Not Detected
Freon 11	1.0	2.4	5.9	13
Freon 113	1.0	12	8.0	94
1,1-Dichloroethene	1.0	4.0	4.2	16
2-Propanol	4.2	9.3	10	23
Carbon Disulfide	4.2	Not Detected	13	Not Detected
Methylene Chloride	10	Not Detected	36	Not Detected
Hexane	1.0	Not Detected	3.7	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.2	Not Detected	12	Not Detected
Chloroform	1.0	1.6	5.1	7.7
1,1,1-Trichloroethane	1.0	Not Detected	5.7	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.6	Not Detected
Benzene	1.0	Not Detected	3.4	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.2	Not Detected
Trichloroethene	1.0	3.7	5.6	20
1,4-Dioxane	4.2	Not Detected	15	Not Detected
Toluene	1.0	Not Detected	4.0	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.7	Not Detected
Tetrachloroethene	1.0	23	7.1	160
o-Xylene	1.0	Not Detected	4.6	Not Detected
TNMOC ref. to Heptane (MW=100)	21	130	86	530

Container Type: 1 Liter Silco Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	100	70-130



## Air Toxics

**Client Sample ID: Lab Blank**

**Lab ID#: 2105075-04A**

### EPA METHOD TO-15 GC/MS FULL SCAN

<b>File Name:</b>	<b>p050705c</b>	<b>Date of Collection: NA</b>		
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 5/7/21 02:08 PM</b>		
<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	0.50	Not Detected	2.5	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TNMOC ref. to Heptane (MW=100)	10	Not Detected	41	Not Detected

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	99	70-130



## Air Toxics

Client Sample ID: CCV

Lab ID#: 2105075-05A

### EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p050702	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/7/21 12:28 PM

Compound	%Recovery
Freon 12	116
Vinyl Chloride	108
Freon 11	108
Freon 113	100
1,1-Dichloroethene	101
2-Propanol	86
Carbon Disulfide	94
Methylene Chloride	96
Hexane	95
1,1-Dichloroethane	101
2-Butanone (Methyl Ethyl Ketone)	98
Chloroform	112
1,1,1-Trichloroethane	104
Carbon Tetrachloride	105
Benzene	109
1,2-Dichloroethane	116
Trichloroethene	110
1,4-Dioxane	100
Toluene	104
1,1,2-Trichloroethane	108
Tetrachloroethene	114
o-Xylene	108
TNMOC ref. to Heptane (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	106	70-130



## Air Toxics

Client Sample ID: LCS

Lab ID#: 2105075-06A

### EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p050703	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/7/21 12:55 PM
Compound	%Recovery	Method	Limits
Freon 12	103	70-130	
Vinyl Chloride	108	70-130	
Freon 11	96	70-130	
Freon 113	91	70-130	
1,1-Dichloroethene	100	70-130	
2-Propanol	79	70-130	
Carbon Disulfide	86	70-130	
Methylene Chloride	80	70-130	
Hexane	88	70-130	
1,1-Dichloroethane	91	70-130	
2-Butanone (Methyl Ethyl Ketone)	89	70-130	
Chloroform	102	70-130	
1,1,1-Trichloroethane	100	70-130	
Carbon Tetrachloride	106	70-130	
Benzene	102	70-130	
1,2-Dichloroethane	108	70-130	
Trichloroethene	102	70-130	
1,4-Dioxane	94	70-130	
Toluene	99	70-130	
1,1,2-Trichloroethane	106	70-130	
Tetrachloroethene	110	70-130	
o-Xylene	110	70-130	
TNMOC ref. to Heptane (MW=100)	Not Spiked		

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method	Limits
Toluene-d8	98	70-130	
1,2-Dichloroethane-d4	101	70-130	
4-Bromofluorobenzene	107	70-130	



## Air Toxics

Client Sample ID: LCSD

Lab ID#: 2105075-06AA

### EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p050704	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/7/21 01:23 PM
Compound	%Recovery	Method	Limits
Freon 12	103	70-130	
Vinyl Chloride	102	70-130	
Freon 11	97	70-130	
Freon 113	93	70-130	
1,1-Dichloroethene	98	70-130	
2-Propanol	80	70-130	
Carbon Disulfide	85	70-130	
Methylene Chloride	81	70-130	
Hexane	89	70-130	
1,1-Dichloroethane	88	70-130	
2-Butanone (Methyl Ethyl Ketone)	92	70-130	
Chloroform	101	70-130	
1,1,1-Trichloroethane	99	70-130	
Carbon Tetrachloride	104	70-130	
Benzene	102	70-130	
1,2-Dichloroethane	109	70-130	
Trichloroethene	102	70-130	
1,4-Dioxane	94	70-130	
Toluene	100	70-130	
1,1,2-Trichloroethane	103	70-130	
Tetrachloroethene	109	70-130	
o-Xylene	108	70-130	
TNMOC ref. to Heptane (MW=100)	Not Spiked		

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method	Limits
Toluene-d8	99	70-130	
1,2-Dichloroethane-d4	100	70-130	
4-Bromofluorobenzene	107	70-130	

**CarScience**  
**Environmental**  
**Laboratories, Inc.**

7440 LINCOLN WAY  
 GARDEN GROVE, CA 92841-1427  
 TEL: (714) 895-5494, FAX: (714) 894-7501

**2105075**

**AIR CHAIN OF CUSTODY RECORD**  
 DATE: 05/03/21  
 PAGE: 1 OF 1

LABORATORY CLIENT		CLIENT PROJECT NAME / NUMBER		P.O. NO.							
de maximis		Omega - GWCS Monthly GAC									
ADDRESS:		PROJECT ADDRESS:		LAB CONTACT OR QUOTE NO.:							
1322 Scott St., Suite 104		12520 Whittier Blvd.									
CITY:	STATE:	CITY:	STATE:								
San Diego	CA	Whittier	CA								
ZIP:	92106	ZIP:	90602								
TELE:		PHONE:									
(562) 766-8149											
TURNDOWN TIME:											
<input type="checkbox"/> SAME DAY	<input type="checkbox"/> 24 HR	<input type="checkbox"/> 48 HR	<input type="checkbox"/> 72 HR	<input type="checkbox"/> 5 DAYS							
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)											
<input type="checkbox"/> EDD											
SPECIAL INSTRUCTIONS:											
Air Type	Sampling Equipment Info		Start Sampling Information		Stop Sampling Information		TO-15 (TAL 2.3)				
	Sample ID	Point of Collection	FIELD ID / (SV/Sel Vap Ambient)	Canister ID#	Canister Size	Flow Controller		Date	Time (24hr clock)	Pressure (Hg)	Date
OC_VGAC_EFF_SP242_050321	SP-EFF-GAC	Vapor	LC405	1L	30748	5/3/2021	1140	28	5/3/2021	1150	4
OC_VGAC_INT_SP245_050321	SP-MID-GAC	Vapor	1667	1L	22465	5/3/2021	1155	26	5/3/2021	1205	4
OC_VGAC_INF_SP241_050321	SP-INF-GAC	Vapor	162090	1L	30630	5/3/2021	1127	28	5/3/2021	1137	4
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
Reinquired by (Signature)		Received by (Signature)		Date	Date		Time		Time		
<i>S. S. M. 2020</i>		<i>J. H. Martin</i>		<u>5/3/21</u>	<u>5/3/21</u>		<u>1230</u>		<u>1105</u>		
Reinquired by (Signature)		Received by (Signature)		Date	Date		Time		Time		
<i>J. H. Martin</i>		<i>C. Cole</i>		<u>5/5/21</u>	<u>5/5/21</u>		<u>1105</u>		<u>1105</u>		

6/14/2021  
Ms. Jaime Dinello  
DeMaximis, Inc  
1340 Reynolds Ave, Suite 105

Irvine CA 92614

Project Name: Omega - GWCS Monthly GAC  
Project #:  
Workorder #: 2106173

Dear Ms. Jaime Dinello

The following report includes the data for the above referenced project for sample(s) received on 6/7/2021 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kathleen Kaneko at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kathleen Kaneko  
Project Manager

## WORK ORDER #: 2106173

## Work Order Summary

<b>CLIENT:</b>	Ms. Jaime Dinello DeMaximis, Inc 1340 Reynolds Ave, Suite 105 Irvine, CA 92614	<b>BILL TO:</b>	Mr. Tom Dorsey Omega Chemical Site Environmental Remediation Trust 1322 Scott St. Suite 104
<b>PHONE:</b>	949.679.9290	<b>P.O. #</b>	
<b>FAX:</b>	949.679.9078	<b>PROJECT #</b>	Omega - GWCS Monthly GAC
<b>DATE RECEIVED:</b>	06/07/2021	<b>CONTACT:</b>	Kathleen Kaneko
<b>DATE COMPLETED:</b>	06/14/2021		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	OC_VGAC_EFF_SP242_060221	TO-15	5.5 "Hg	10 psi
02A	OC_VGAC_INT_SP245_060221	TO-15	2.5 "Hg	10 psi
03A	OC_VGAC_INF_SP241_060221	TO-15	5.5 "Hg	10 psi
04A	Lab Blank	TO-15	NA	NA
05A	CCV	TO-15	NA	NA
06A	LCS	TO-15	NA	NA
06AA	LCSD	TO-15	NA	NA

CERTIFIED BY:



DATE: 06/14/21

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209220, NJ NELAP - CA016,  
NY NELAP - 11291, TX NELAP - T104704434-20-16, UT NELAP – CA009332020-12, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-014, Effective date: 10/18/2020, Expiration date: 10/17/2021.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

**LABORATORY NARRATIVE  
EPA Method TO-15  
DeMaximis, Inc  
Workorder# 2106173**

Three 1 Liter Summa Canister samples were received on June 07, 2021. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

The TNMOC concentration was calculated by taking the total area counts in the sample and quantitating the area based on the response factor of TNMOC ref. to Heptane (MW=100).

**Definition of Data Qualifying Flags**

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



## Air Toxics

### Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: OC\_VGAC\_EFF\_SP242\_060221

Lab ID#: 2106173-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.0	2.4	5.8	14
1,1-Dichloroethene	1.0	1.5	4.1	6.0
2-Propanol	4.1	9.2	10	22
Hexane	1.0	5.1	3.6	18
2-Butanone (Methyl Ethyl Ketone)	4.1	430 E	12	1300 E
TNMOC ref. to Heptane (MW=100)	21	1300	84	5300

Client Sample ID: OC\_VGAC\_INT\_SP245\_060221

Lab ID#: 2106173-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.92	3.0	5.1	17
1,1-Dichloroethene	0.92	5.6	3.6	22
2-Propanol	3.7	4.7	9.0	12
TNMOC ref. to Heptane (MW=100)	18	22	75	90

Client Sample ID: OC\_VGAC\_INF\_SP241\_060221

Lab ID#: 2106173-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.0	2.5	5.8	14
Freon 113	1.0	21	7.9	160
1,1-Dichloroethene	1.0	4.6	4.1	18
2-Propanol	4.1	5.3	10	13
Carbon Disulfide	4.1	18	13	55
Chloroform	1.0	2.2	5.0	11
Trichloroethene	1.0	4.6	5.5	25
Tetrachloroethene	1.0	30	7.0	210
TNMOC ref. to Heptane (MW=100)	21	100	84	410



## Air Toxics

Client Sample ID: OC\_VGAC\_EFF\_SP242\_060221

Lab ID#: 2106173-01A

### EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p061106	Date of Collection:	6/2/21 11:49:00 AM	
Dil. Factor:	2.06	Date of Analysis:	6/11/21 03:01 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.1	Not Detected
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
Freon 11	1.0	2.4	5.8	14
Freon 113	1.0	Not Detected	7.9	Not Detected
1,1-Dichloroethene	1.0	1.5	4.1	6.0
2-Propanol	4.1	9.2	10	22
Carbon Disulfide	4.1	Not Detected	13	Not Detected
Methylene Chloride	10	Not Detected	36	Not Detected
Hexane	1.0	5.1	3.6	18
1,1-Dichloroethane	1.0	Not Detected	4.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.1	430 E	12	1300 E
Chloroform	1.0	Not Detected	5.0	Not Detected
1,1,1-Trichloroethane	1.0	Not Detected	5.6	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.5	Not Detected
Benzene	1.0	Not Detected	3.3	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.2	Not Detected
Trichloroethene	1.0	Not Detected	5.5	Not Detected
1,4-Dioxane	4.1	Not Detected	15	Not Detected
Toluene	1.0	Not Detected	3.9	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.6	Not Detected
Tetrachloroethene	1.0	Not Detected	7.0	Not Detected
o-Xylene	1.0	Not Detected	4.5	Not Detected
TNMOC ref. to Heptane (MW=100)	21	1300	84	5300

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	99	70-130



## Air Toxics

Client Sample ID: OC\_VGAC\_INT\_SP245\_060221

Lab ID#: 2106173-02A

### EPA METHOD TO-15 GC/MS FULL SCAN

<b>File Name:</b>	<b>p061107</b>	<b>Date of Collection: 6/2/21 11:48:00 AM</b>		
<b>Dil. Factor:</b>	<b>1.83</b>	<b>Date of Analysis: 6/11/21 03:30 PM</b>		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.92	Not Detected	4.5	Not Detected
Vinyl Chloride	0.92	Not Detected	2.3	Not Detected
Freon 11	0.92	3.0	5.1	17
Freon 113	0.92	Not Detected	7.0	Not Detected
1,1-Dichloroethene	0.92	5.6	3.6	22
2-Propanol	3.7	4.7	9.0	12
Carbon Disulfide	3.7	Not Detected	11	Not Detected
Methylene Chloride	9.2	Not Detected	32	Not Detected
Hexane	0.92	Not Detected	3.2	Not Detected
1,1-Dichloroethane	0.92	Not Detected	3.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.7	Not Detected	11	Not Detected
Chloroform	0.92	Not Detected	4.5	Not Detected
1,1,1-Trichloroethane	0.92	Not Detected	5.0	Not Detected
Carbon Tetrachloride	0.92	Not Detected	5.8	Not Detected
Benzene	0.92	Not Detected	2.9	Not Detected
1,2-Dichloroethane	0.92	Not Detected	3.7	Not Detected
Trichloroethene	0.92	Not Detected	4.9	Not Detected
1,4-Dioxane	3.7	Not Detected	13	Not Detected
Toluene	0.92	Not Detected	3.4	Not Detected
1,1,2-Trichloroethane	0.92	Not Detected	5.0	Not Detected
Tetrachloroethene	0.92	Not Detected	6.2	Not Detected
o-Xylene	0.92	Not Detected	4.0	Not Detected
TNMOC ref. to Heptane (MW=100)	18	22	75	90

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	97	70-130



## Air Toxics

Client Sample ID: OC\_VGAC\_INF\_SP241\_060221

Lab ID#: 2106173-03A

### EPA METHOD TO-15 GC/MS FULL SCAN

<b>File Name:</b>	<b>p061108</b>	<b>Date of Collection:</b> 6/2/21 11:49:00 AM		
<b>Dil. Factor:</b>	<b>2.06</b>	<b>Date of Analysis:</b> 6/11/21 04:00 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.1	Not Detected
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
Freon 11	1.0	2.5	5.8	14
Freon 113	1.0	21	7.9	160
1,1-Dichloroethene	1.0	4.6	4.1	18
2-Propanol	4.1	5.3	10	13
Carbon Disulfide	4.1	18	13	55
Methylene Chloride	10	Not Detected	36	Not Detected
Hexane	1.0	Not Detected	3.6	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.1	Not Detected	12	Not Detected
Chloroform	1.0	2.2	5.0	11
1,1,1-Trichloroethane	1.0	Not Detected	5.6	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.5	Not Detected
Benzene	1.0	Not Detected	3.3	Not Detected
1,2-Dichloroethane	1.0	Not Detected	4.2	Not Detected
Trichloroethene	1.0	4.6	5.5	25
1,4-Dioxane	4.1	Not Detected	15	Not Detected
Toluene	1.0	Not Detected	3.9	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.6	Not Detected
Tetrachloroethene	1.0	30	7.0	210
o-Xylene	1.0	Not Detected	4.5	Not Detected
TNMOC ref. to Heptane (MW=100)	21	100	84	410

**Container Type:** 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	97	70-130



## Air Toxics

**Client Sample ID: Lab Blank**

**Lab ID#: 2106173-04A**

### EPA METHOD TO-15 GC/MS FULL SCAN

<b>File Name:</b>	<b>p061105c</b>	<b>Date of Collection: NA</b>		
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 6/11/21 10:52 AM</b>		
<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Freon 12	0.50	Not Detected	2.5	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TNMOC ref. to Heptane (MW=100)	10	Not Detected	41	Not Detected

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	97	70-130



## Air Toxics

Client Sample ID: CCV

Lab ID#: 2106173-05A

### EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p061102	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	6/11/21 09:25 AM

Compound	%Recovery
Freon 12	111
Vinyl Chloride	94
Freon 11	109
Freon 113	98
1,1-Dichloroethene	94
2-Propanol	104
Carbon Disulfide	98
Methylene Chloride	114
Hexane	98
1,1-Dichloroethane	105
2-Butanone (Methyl Ethyl Ketone)	98
Chloroform	108
1,1,1-Trichloroethane	102
Carbon Tetrachloride	108
Benzene	104
1,2-Dichloroethane	118
Trichloroethene	108
1,4-Dioxane	98
Toluene	103
1,1,2-Trichloroethane	105
Tetrachloroethene	105
o-Xylene	99
TNMOC ref. to Heptane (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	102	70-130



## Air Toxics

Client Sample ID: LCS

Lab ID#: 2106173-06A

### EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p061103	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	6/11/21 09:54 AM
Compound	%Recovery	Method	Limits
Freon 12	114	70-130	
Vinyl Chloride	96	70-130	
Freon 11	111	70-130	
Freon 113	103	70-130	
1,1-Dichloroethene	102	70-130	
2-Propanol	106	70-130	
Carbon Disulfide	99	70-130	
Methylene Chloride	114	70-130	
Hexane	103	70-130	
1,1-Dichloroethane	108	70-130	
2-Butanone (Methyl Ethyl Ketone)	98	70-130	
Chloroform	110	70-130	
1,1,1-Trichloroethane	105	70-130	
Carbon Tetrachloride	112	70-130	
Benzene	105	70-130	
1,2-Dichloroethane	118	70-130	
Trichloroethene	109	70-130	
1,4-Dioxane	96	70-130	
Toluene	102	70-130	
1,1,2-Trichloroethane	105	70-130	
Tetrachloroethene	105	70-130	
o-Xylene	99	70-130	
TNMOC ref. to Heptane (MW=100)	Not Spiked		

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method	Limits
Toluene-d8	102	70-130	
1,2-Dichloroethane-d4	108	70-130	
4-Bromofluorobenzene	102	70-130	



## Air Toxics

Client Sample ID: LCSD

Lab ID#: 2106173-06AA

### EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p061104	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	6/11/21 10:22 AM
Compound	%Recovery	Method	Limits
Freon 12	111	70-130	
Vinyl Chloride	101	70-130	
Freon 11	108	70-130	
Freon 113	101	70-130	
1,1-Dichloroethene	103	70-130	
2-Propanol	102	70-130	
Carbon Disulfide	98	70-130	
Methylene Chloride	111	70-130	
Hexane	100	70-130	
1,1-Dichloroethane	105	70-130	
2-Butanone (Methyl Ethyl Ketone)	97	70-130	
Chloroform	107	70-130	
1,1,1-Trichloroethane	102	70-130	
Carbon Tetrachloride	108	70-130	
Benzene	103	70-130	
1,2-Dichloroethane	116	70-130	
Trichloroethene	106	70-130	
1,4-Dioxane	93	70-130	
Toluene	100	70-130	
1,1,2-Trichloroethane	104	70-130	
Tetrachloroethene	104	70-130	
o-Xylene	99	70-130	
TNMOC ref. to Heptane (MW=100)	Not Spiked		

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method	Limits
Toluene-d8	99	70-130	
1,2-Dichloroethane-d4	107	70-130	
4-Bromofluorobenzene	102	70-130	

**C**alscience  
**E**nvironmental  
**L**aboratories, Inc.

7440 LINCOLN WAY  
 GARDEN GROVE, CA 92841-1427  
 TEL: (714) 895-5494, FAX: (714) 894-7501

**AIR CHAIN OF CUSTODY RECORD**

DATE: 06/02/21

PAGE: 1 OF 1

LABORATORY CLIENT:  
 de maximis

ADDRESS:

1322 Scott St., Suite 104

CITY:

San Diego

STATE:

CA

ZIP:

92106

TELEPHONE:

(562) 756-8149

EMAIL:

ldimello@de maximis.com

TURNAROUND TIME:

SAME DAY  24 HR  48 HR  72 HR  5 DAYS  10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)

DODD

/SPECIAL INSTRUCTIONS:

CLIENT PROJECT NAME / NUMBER:  
 Omega - GWICS Monthly GAC

PROJECT ADDRESS:  
 12520 Whittier Blvd.

CITY:

Whittier

STATE:

CA

ZIP:

90602

PROJECT CONTACT: Trent Henderson [trent.henderson@jacobsandhauer.com](mailto:trent.henderson@jacobsandhauer.com)

SAMPLE(S) NAME / SIGNATURE:  
 K. H. Knudsen ARW

RECEIVED BY:

RECEIVED DATE:

TIME:

PO NO.:

LAB CONTACT OR QUOTE NO.:

USE ONLY:

REQUESTED ANALYSES:

LINE NUMBER	SAMPLE ID	FIELD ID / Point of Collection	Air Type		Sampling Equipment Info			Start Sampling Information			Stop Sampling Information			Comments
			(S) Indoor (A) Soil Vap	Canister ID#	Canister Size 6L or 1L	Flow Controller ID#	Date	Time (24hr clock)	Canister Pressure (Torr)	Date	Time (24hr clock)	Canister Pressure (Torr)	TO-15 (TAL 2.3)	
01A	OC_VGAC_EFF_SP242_060221	SP-EFF-GAC	Vapor	111123	1L	30750	6/2/2021	1140	-30	6/2/2021	1149	-5	X	
02A	OC_VGAC_INT_SP245_060221	SP-MBD-GAC	Vapor	113153	1L	25384	6/2/2021	1142	-29	6/2/2021	1148	-7.5	X	
03A	OC_VGAC_INF_SP241_060221	SP-INF-GAC	Vapor	9177	1L	22535	6/2/2021	1144	-28	6/2/2021	1149	-4.5	X	
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11														
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14														
15														
Requisitioned by: (Signature)			Received by: (Signature)			Date: 6/2/21			Time: 1032					
Reinquished by: (Signature)			Recorded by: (Signature)			Date:			Time:					
Reinquished by: (Signature)			Received by: (Signature)			Date:			Time:					



Environment Testing  
America



## ANALYTICAL REPORT

Eurofins Calscience Irvine  
17461 Derian Ave  
Suite 100  
Irvine, CA 92614-5817  
Tel: (949)261-1022

Laboratory Job ID: 440-281561-1

Laboratory Sample Delivery Group: Omega Chemical  
Client Project/Site: Omega Chemical - GWCSW Monthly

For:

Jacob & Hefner Associates P.C.  
15375 Barranca Parkway, J-101  
Irvine, California 92618

Attn: Trent Henderson

Danielle Roberts

Authorized for release by:  
4/15/2021 9:52:02 AM

Danielle Roberts, Senior Project Manager  
(949)260-3249  
[Danielle.Roberts@Eurofinset.com](mailto:Danielle.Roberts@Eurofinset.com)

### LINKS

Review your project  
results through

**Total Access**

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The  
Expert

Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Sample Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-281561-1	OC_SP220B_EFF_040621	Water	04/06/21 10:25	04/07/21 12:20	
440-281561-2	OC_SP210_INF_040621	Water	04/06/21 10:35	04/07/21 12:20	
440-281561-3	OC_TB_040621	Water	04/06/21 10:00	04/07/21 12:20	

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# Case Narrative

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

## Job ID: 440-281561-1

### Laboratory: Eurofins Calscience Irvine

#### Narrative

#### Job Narrative 440-281561-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 4/7/2021 12:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.8° C.

#### GC/MS VOA

Method 8260B: The MS percent recovery for Isopropyl alcohol was not calculated due to the raw amount was below the MDL and it gave ND result. The MS was 54%. (550-161388-A-2 MS)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

Method 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-643788. A laboratory control sample duplicate (LCSD) was extracted to provide precision data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

## Detection Summary

Client: Jacob &amp; Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

**Client Sample ID: OC\_SP220B\_EFF\_040621****Lab Sample ID: 440-281561-1**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	7.7		0.48	ug/L	1		8270C SIM	Total/NA

**Client Sample ID: OC\_SP210\_INF\_040621****Lab Sample ID: 440-281561-2**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	64		5.0	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	16		1.0	ug/L	1		8260B	Total/NA
Chloroform	4.7		1.0	ug/L	1		8260B	Total/NA
Trichloroethylene	13		1.0	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	11		1.0	ug/L	1		8260B	Total/NA
Tetrachloroethylene - DL	110		5.0	ug/L	5		8260B	Total/NA

**Client Sample ID: OC\_TB\_040621****Lab Sample ID: 440-281561-3**

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

# Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

**Client Sample ID: OC\_SP220B\_EFF\_040621**

**Lab Sample ID: 440-281561-1**

**Matrix: Water**

Date Collected: 04/06/21 10:25

Date Received: 04/07/21 12:20

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		04/09/21 02:44		1
1,1,1-Trichloroethane	ND		1.0	ug/L		04/09/21 02:44		1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		04/09/21 02:44		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L		04/09/21 02:44		1
1,1,2-Trichloroethane	ND		1.0	ug/L		04/09/21 02:44		1
1,1-Dichloroethane	ND		1.0	ug/L		04/09/21 02:44		1
1,1-Dichloroethene	ND		1.0	ug/L		04/09/21 02:44		1
1,1-Dichloropropene	ND		1.0	ug/L		04/09/21 02:44		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		04/09/21 02:44		1
1,2,3-Trichloropropane	ND		1.0	ug/L		04/09/21 02:44		1
1,2,4-Trichlorobenzene	ND		1.0	ug/L		04/09/21 02:44		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		04/09/21 02:44		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		04/09/21 02:44		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		04/09/21 02:44		1
1,2-Dichlorobenzene	ND		1.0	ug/L		04/09/21 02:44		1
1,2-Dichloroethane	ND		1.0	ug/L		04/09/21 02:44		1
1,2-Dichloropropene	ND		1.0	ug/L		04/09/21 02:44		1
1,3,5-Trimethylbenzene	ND		1.0	ug/L		04/09/21 02:44		1
1,3-Dichlorobenzene	ND		1.0	ug/L		04/09/21 02:44		1
1,3-Dichloropropane	ND		1.0	ug/L		04/09/21 02:44		1
1,4-Dichlorobenzene	ND		1.0	ug/L		04/09/21 02:44		1
2,2-Dichloropropane	ND		1.0	ug/L		04/09/21 02:44		1
2-Chlorotoluene	ND		1.0	ug/L		04/09/21 02:44		1
4-Chlorotoluene	ND		1.0	ug/L		04/09/21 02:44		1
Acetone	ND		10	ug/L		04/09/21 02:44		1
Benzene	ND		0.50	ug/L		04/09/21 02:44		1
Bromobenzene	ND		1.0	ug/L		04/09/21 02:44		1
Bromochloromethane	ND		1.0	ug/L		04/09/21 02:44		1
Bromodichloromethane	ND		1.0	ug/L		04/09/21 02:44		1
Bromoform	ND		1.0	ug/L		04/09/21 02:44		1
Bromomethane	ND		1.0	ug/L		04/09/21 02:44		1
Carbon tetrachloride	ND		0.50	ug/L		04/09/21 02:44		1
Chlorobenzene	ND		1.0	ug/L		04/09/21 02:44		1
Chloroethane	ND		1.0	ug/L		04/09/21 02:44		1
Chloroform	ND		1.0	ug/L		04/09/21 02:44		1
Chloromethane	ND		1.0	ug/L		04/09/21 02:44		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		04/09/21 02:44		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		04/09/21 02:44		1
Dibromochloromethane	ND		1.0	ug/L		04/09/21 02:44		1
Dibromomethane	ND		1.0	ug/L		04/09/21 02:44		1
Dichlorodifluoromethane	ND		1.0	ug/L		04/09/21 02:44		1
Ethylbenzene	ND		1.0	ug/L		04/09/21 02:44		1
Hexachlorobutadiene	ND		1.0	ug/L		04/09/21 02:44		1
Isopropyl alcohol	ND		250	ug/L		04/09/21 02:44		1
Isopropylbenzene	ND		1.0	ug/L		04/09/21 02:44		1
m,p-Xylene	ND		1.0	ug/L		04/09/21 02:44		1
Methylene Chloride	ND		5.0	ug/L		04/09/21 02:44		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		04/09/21 02:44		1
Naphthalene	ND		1.0	ug/L		04/09/21 02:44		1

Eurofins Calscience Irvine

# Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

**Client Sample ID: OC\_SP220B\_EFF\_040621**

**Lab Sample ID: 440-281561-1**

Matrix: Water

Date Collected: 04/06/21 10:25

Date Received: 04/07/21 12:20

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	ug/L		04/09/21 02:44		1
N-Propylbenzene	ND		1.0	ug/L		04/09/21 02:44		1
o-Xylene	ND		1.0	ug/L		04/09/21 02:44		1
p-Isopropyltoluene	ND		1.0	ug/L		04/09/21 02:44		1
sec-Butylbenzene	ND		1.0	ug/L		04/09/21 02:44		1
Styrene	ND		1.0	ug/L		04/09/21 02:44		1
tert-Butylbenzene	ND		1.0	ug/L		04/09/21 02:44		1
Tetrachloroethene	ND		1.0	ug/L		04/09/21 02:44		1
Toluene	ND		1.0	ug/L		04/09/21 02:44		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		04/09/21 02:44		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		04/09/21 02:44		1
Trichloroethene	ND		1.0	ug/L		04/09/21 02:44		1
Trichlorofluoromethane	ND		1.0	ug/L		04/09/21 02:44		1
Vinyl chloride	ND		0.50	ug/L		04/09/21 02:44		1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	112		70 - 130			04/09/21 02:44		1
4-Bromofluorobenzene (Surr)	95		80 - 120			04/09/21 02:44		1
Dibromofluoromethane (Surr)	117		76 - 132			04/09/21 02:44		1
Toluene-d8 (Surr)	102		80 - 128			04/09/21 02:44		1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,4-Dioxane</b>	<b>7.7</b>		0.48	ug/L		04/12/21 17:56	04/14/21 13:19	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,4-Dioxane-d8 (Surr)	50		27 - 120			04/12/21 17:56	04/14/21 13:19	1

**Client Sample ID: OC\_SP210\_INF\_040621**

**Lab Sample ID: 440-281561-2**

Matrix: Water

Date Collected: 04/06/21 10:35

Date Received: 04/07/21 12:20

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		04/09/21 03:13		1
1,1,1-Trichloroethane	ND		1.0	ug/L		04/09/21 03:13		1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		04/09/21 03:13		1
<b>1,1,2-Trichloro-1,2,2-trifluoroethane</b>	<b>64</b>		5.0	ug/L		04/09/21 03:13		1
1,1,2-Trichloroethane	ND		1.0	ug/L		04/09/21 03:13		1
1,1-Dichloroethane	ND		1.0	ug/L		04/09/21 03:13		1
<b>1,1-Dichloroethene</b>	<b>16</b>		1.0	ug/L		04/09/21 03:13		1
1,1-Dichloropropene	ND		1.0	ug/L		04/09/21 03:13		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		04/09/21 03:13		1
1,2,3-Trichloropropane	ND		1.0	ug/L		04/09/21 03:13		1
1,2,4-Trichlorobenzene	ND		1.0	ug/L		04/09/21 03:13		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		04/09/21 03:13		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		04/09/21 03:13		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		04/09/21 03:13		1
1,2-Dichlorobenzene	ND		1.0	ug/L		04/09/21 03:13		1
1,2-Dichloroethane	ND		1.0	ug/L		04/09/21 03:13		1

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# Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

**Client Sample ID: OC\_SP210\_INF\_040621**

**Lab Sample ID: 440-281561-2**

**Matrix: Water**

Date Collected: 04/06/21 10:35

Date Received: 04/07/21 12:20

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		1.0	ug/L		04/09/21 03:13		1
1,3,5-Trimethylbenzene	ND		1.0	ug/L		04/09/21 03:13		1
1,3-Dichlorobenzene	ND		1.0	ug/L		04/09/21 03:13		1
1,3-Dichloropropane	ND		1.0	ug/L		04/09/21 03:13		1
1,4-Dichlorobenzene	ND		1.0	ug/L		04/09/21 03:13		1
2,2-Dichloropropane	ND		1.0	ug/L		04/09/21 03:13		1
2-Chlorotoluene	ND		1.0	ug/L		04/09/21 03:13		1
4-Chlorotoluene	ND		1.0	ug/L		04/09/21 03:13		1
Acetone	ND		10	ug/L		04/09/21 03:13		1
Benzene	ND		0.50	ug/L		04/09/21 03:13		1
Bromobenzene	ND		1.0	ug/L		04/09/21 03:13		1
Bromochloromethane	ND		1.0	ug/L		04/09/21 03:13		1
Bromodichloromethane	ND		1.0	ug/L		04/09/21 03:13		1
Bromoform	ND		1.0	ug/L		04/09/21 03:13		1
Bromomethane	ND		1.0	ug/L		04/09/21 03:13		1
Carbon tetrachloride	ND		0.50	ug/L		04/09/21 03:13		1
Chlorobenzene	ND		1.0	ug/L		04/09/21 03:13		1
Chloroethane	ND		1.0	ug/L		04/09/21 03:13		1
<b>Chloroform</b>	<b>4.7</b>		1.0	ug/L		04/09/21 03:13		1
Chloromethane	ND		1.0	ug/L		04/09/21 03:13		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		04/09/21 03:13		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		04/09/21 03:13		1
Dibromochloromethane	ND		1.0	ug/L		04/09/21 03:13		1
Dibromomethane	ND		1.0	ug/L		04/09/21 03:13		1
Dichlorodifluoromethane	ND		1.0	ug/L		04/09/21 03:13		1
Ethylbenzene	ND		1.0	ug/L		04/09/21 03:13		1
Hexachlorobutadiene	ND		1.0	ug/L		04/09/21 03:13		1
Isopropyl alcohol	ND		250	ug/L		04/09/21 03:13		1
Isopropylbenzene	ND		1.0	ug/L		04/09/21 03:13		1
m,p-Xylene	ND		1.0	ug/L		04/09/21 03:13		1
Methylene Chloride	ND		5.0	ug/L		04/09/21 03:13		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		04/09/21 03:13		1
Naphthalene	ND		1.0	ug/L		04/09/21 03:13		1
n-Butylbenzene	ND		1.0	ug/L		04/09/21 03:13		1
N-Propylbenzene	ND		1.0	ug/L		04/09/21 03:13		1
o-Xylene	ND		1.0	ug/L		04/09/21 03:13		1
p-Isopropyltoluene	ND		1.0	ug/L		04/09/21 03:13		1
sec-Butylbenzene	ND		1.0	ug/L		04/09/21 03:13		1
Styrene	ND		1.0	ug/L		04/09/21 03:13		1
tert-Butylbenzene	ND		1.0	ug/L		04/09/21 03:13		1
Toluene	ND		1.0	ug/L		04/09/21 03:13		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		04/09/21 03:13		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		04/09/21 03:13		1
<b>Trichloroethene</b>	<b>13</b>		1.0	ug/L		04/09/21 03:13		1
<b>Trichlorofluoromethane</b>	<b>11</b>		1.0	ug/L		04/09/21 03:13		1
Vinyl chloride	ND		0.50	ug/L		04/09/21 03:13		1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	112		70 - 130			04/09/21 03:13		1
4-Bromofluorobenzene (Surr)	94		80 - 120			04/09/21 03:13		1

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# Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

**Client Sample ID: OC\_SP210\_INF\_040621**

**Lab Sample ID: 440-281561-2**

Matrix: Water

Date Collected: 04/06/21 10:35

Date Received: 04/07/21 12:20

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	114		76 - 132		04/09/21 03:13	1
Toluene-d8 (Surr)	100		80 - 128		04/09/21 03:13	1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	110		5.0	ug/L			04/09/21 20:42	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		70 - 130				04/09/21 20:42	5
4-Bromofluorobenzene (Surr)	94		80 - 120				04/09/21 20:42	5
Dibromofluoromethane (Surr)	124		76 - 132				04/09/21 20:42	5
Toluene-d8 (Surr)	103		80 - 128				04/09/21 20:42	5

**Client Sample ID: OC\_TB\_040621**

**Lab Sample ID: 440-281561-3**

Matrix: Water

Date Collected: 04/06/21 10:00

Date Received: 04/07/21 12:20

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			04/09/21 03:41	1
1,1,1-Trichloroethane	ND		1.0	ug/L			04/09/21 03:41	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			04/09/21 03:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			04/09/21 03:41	1
1,1,2-Trichloroethane	ND		1.0	ug/L			04/09/21 03:41	1
1,1-Dichloroethane	ND		1.0	ug/L			04/09/21 03:41	1
1,1-Dichloroethene	ND		1.0	ug/L			04/09/21 03:41	1
1,1-Dichloropropene	ND		1.0	ug/L			04/09/21 03:41	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			04/09/21 03:41	1
1,2,3-Trichloropropane	ND		1.0	ug/L			04/09/21 03:41	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			04/09/21 03:41	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			04/09/21 03:41	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			04/09/21 03:41	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			04/09/21 03:41	1
1,2-Dichlorobenzene	ND		1.0	ug/L			04/09/21 03:41	1
1,2-Dichloroethane	ND		1.0	ug/L			04/09/21 03:41	1
1,2-Dichloropropane	ND		1.0	ug/L			04/09/21 03:41	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			04/09/21 03:41	1
1,3-Dichlorobenzene	ND		1.0	ug/L			04/09/21 03:41	1
1,3-Dichloropropane	ND		1.0	ug/L			04/09/21 03:41	1
1,4-Dichlorobenzene	ND		1.0	ug/L			04/09/21 03:41	1
2,2-Dichloropropane	ND		1.0	ug/L			04/09/21 03:41	1
2-Chlorotoluene	ND		1.0	ug/L			04/09/21 03:41	1
4-Chlorotoluene	ND		1.0	ug/L			04/09/21 03:41	1
Acetone	ND		10	ug/L			04/09/21 03:41	1
Benzene	ND		0.50	ug/L			04/09/21 03:41	1
Bromobenzene	ND		1.0	ug/L			04/09/21 03:41	1
Bromochloromethane	ND		1.0	ug/L			04/09/21 03:41	1
Bromodichloromethane	ND		1.0	ug/L			04/09/21 03:41	1
Bromoform	ND		1.0	ug/L			04/09/21 03:41	1
Bromomethane	ND		1.0	ug/L			04/09/21 03:41	1

Eurofins Calscience Irvine

# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1  
 SDG: Omega Chemical

**Client Sample ID: OC\_TB\_040621**

Date Collected: 04/06/21 10:00

Date Received: 04/07/21 12:20

**Lab Sample ID: 440-281561-3**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.50	ug/L		04/09/21 03:41		1
Chlorobenzene	ND		1.0	ug/L		04/09/21 03:41		1
Chloroethane	ND		1.0	ug/L		04/09/21 03:41		1
Chloroform	ND		1.0	ug/L		04/09/21 03:41		1
Chloromethane	ND		1.0	ug/L		04/09/21 03:41		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		04/09/21 03:41		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		04/09/21 03:41		1
Dibromochloromethane	ND		1.0	ug/L		04/09/21 03:41		1
Dibromomethane	ND		1.0	ug/L		04/09/21 03:41		1
Dichlorodifluoromethane	ND		1.0	ug/L		04/09/21 03:41		1
Ethylbenzene	ND		1.0	ug/L		04/09/21 03:41		1
Hexachlorobutadiene	ND		1.0	ug/L		04/09/21 03:41		1
Isopropyl alcohol	ND		250	ug/L		04/09/21 03:41		1
Isopropylbenzene	ND		1.0	ug/L		04/09/21 03:41		1
m,p-Xylene	ND		1.0	ug/L		04/09/21 03:41		1
Methylene Chloride	ND		5.0	ug/L		04/09/21 03:41		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		04/09/21 03:41		1
Naphthalene	ND		1.0	ug/L		04/09/21 03:41		1
n-Butylbenzene	ND		1.0	ug/L		04/09/21 03:41		1
N-Propylbenzene	ND		1.0	ug/L		04/09/21 03:41		1
o-Xylene	ND		1.0	ug/L		04/09/21 03:41		1
p-Isopropyltoluene	ND		1.0	ug/L		04/09/21 03:41		1
sec-Butylbenzene	ND		1.0	ug/L		04/09/21 03:41		1
Styrene	ND		1.0	ug/L		04/09/21 03:41		1
tert-Butylbenzene	ND		1.0	ug/L		04/09/21 03:41		1
Tetrachloroethene	ND		1.0	ug/L		04/09/21 03:41		1
Toluene	ND		1.0	ug/L		04/09/21 03:41		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		04/09/21 03:41		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		04/09/21 03:41		1
Trichloroethene	ND		1.0	ug/L		04/09/21 03:41		1
Trichlorofluoromethane	ND		1.0	ug/L		04/09/21 03:41		1
Vinyl chloride	ND		0.50	ug/L		04/09/21 03:41		1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		70 - 130		04/09/21 03:41	1
4-Bromofluorobenzene (Surr)	91		80 - 120		04/09/21 03:41	1
Dibromofluoromethane (Surr)	114		76 - 132		04/09/21 03:41	1
Toluene-d8 (Surr)	102		80 - 128		04/09/21 03:41	1

# Surrogate Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-130)	BFB (80-120)	DBFM (76-132)	TOL (80-128)
440-281561-1	OC_SP220B_EFF_040621	112	95	117	102
440-281561-2	OC_SP210_INF_040621	112	94	114	100
440-281561-2 - DL	OC_SP210_INF_040621	116	94	124	103
440-281561-3	OC_TB_040621	111	91	114	102
550-161305-A-3 MS	Matrix Spike	98	86	103	96
550-161305-A-3 MSD	Matrix Spike Duplicate	99	94	105	98
550-161388-A-2 MS	Matrix Spike	101	92	103	96
550-161388-A-2 MSD	Matrix Spike Duplicate	90	92	94	99
LCS 440-643528/1002	Lab Control Sample	100	96	104	89
LCS 440-643528/1004	Lab Control Sample	98	92	97	98
LCS 440-643633/1002	Lab Control Sample	100	86	104	106
LCSD 440-643633/3	Lab Control Sample Dup	99	95	104	99
MB 440-643528/5	Method Blank	111	110	109	93
MB 440-643633/5	Method Blank	109	93	113	103

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DXE (27-120)			
440-281561-1	OC_SP220B_EFF_040621	50			
LCS 440-643788/3-A	Lab Control Sample	54			
LCSD 440-643788/4-A	Lab Control Sample Dup	40			
MB 440-643788/1-A	Method Blank	44			

### Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

## Method Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

# Lab Chronicle

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

**Client Sample ID: OC\_SP220B\_EFF\_040621**

**Lab Sample ID: 440-281561-1**

Matrix: Water

Date Collected: 04/06/21 10:25

Date Received: 04/07/21 12:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	643528	04/09/21 02:44	A1W	TAL IRV
Total/NA	Prep	3520C			1050 mL	1 mL	643788	04/12/21 17:56	AR4F	TAL IRV
Total/NA	Analysis	8270C SIM		1			643998	04/14/21 13:19	AR4F	TAL IRV

**Client Sample ID: OC\_SP210\_INF\_040621**

**Lab Sample ID: 440-281561-2**

Matrix: Water

Date Collected: 04/06/21 10:35

Date Received: 04/07/21 12:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	643528	04/09/21 03:13	A1W	TAL IRV
Total/NA	Analysis	8260B	DL	5	10 mL	10 mL	643633	04/09/21 20:42	K6MO	TAL IRV

**Client Sample ID: OC\_TB\_040621**

**Lab Sample ID: 440-281561-3**

Matrix: Water

Date Collected: 04/06/21 10:00

Date Received: 04/07/21 12:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	643528	04/09/21 03:41	A1W	TAL IRV

**Laboratory References:**

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

# QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-643528/5**

**Matrix: Water**

**Analysis Batch: 643528**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		04/08/21 18:16		1
1,1,1-Trichloroethane	ND		1.0	ug/L		04/08/21 18:16		1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		04/08/21 18:16		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L		04/08/21 18:16		1
1,1,2-Trichloroethane	ND		1.0	ug/L		04/08/21 18:16		1
1,1-Dichloroethane	ND		1.0	ug/L		04/08/21 18:16		1
1,1-Dichloroethene	ND		1.0	ug/L		04/08/21 18:16		1
1,1-Dichloropropene	ND		1.0	ug/L		04/08/21 18:16		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		04/08/21 18:16		1
1,2,3-Trichloropropane	ND		1.0	ug/L		04/08/21 18:16		1
1,2,4-Trichlorobenzene	ND		1.0	ug/L		04/08/21 18:16		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		04/08/21 18:16		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		04/08/21 18:16		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		04/08/21 18:16		1
1,2-Dichlorobenzene	ND		1.0	ug/L		04/08/21 18:16		1
1,2-Dichloroethane	ND		1.0	ug/L		04/08/21 18:16		1
1,2-Dichloropropane	ND		1.0	ug/L		04/08/21 18:16		1
1,3,5-Trimethylbenzene	ND		1.0	ug/L		04/08/21 18:16		1
1,3-Dichlorobenzene	ND		1.0	ug/L		04/08/21 18:16		1
1,3-Dichloropropane	ND		1.0	ug/L		04/08/21 18:16		1
1,4-Dichlorobenzene	ND		1.0	ug/L		04/08/21 18:16		1
2,2-Dichloropropane	ND		1.0	ug/L		04/08/21 18:16		1
2-Chlorotoluene	ND		1.0	ug/L		04/08/21 18:16		1
4-Chlorotoluene	ND		1.0	ug/L		04/08/21 18:16		1
Acetone	ND		10	ug/L		04/08/21 18:16		1
Benzene	ND		0.50	ug/L		04/08/21 18:16		1
Bromobenzene	ND		1.0	ug/L		04/08/21 18:16		1
Bromochloromethane	ND		1.0	ug/L		04/08/21 18:16		1
Bromodichloromethane	ND		1.0	ug/L		04/08/21 18:16		1
Bromoform	ND		1.0	ug/L		04/08/21 18:16		1
Bromomethane	ND		1.0	ug/L		04/08/21 18:16		1
Carbon tetrachloride	ND		0.50	ug/L		04/08/21 18:16		1
Chlorobenzene	ND		1.0	ug/L		04/08/21 18:16		1
Chloroethane	ND		1.0	ug/L		04/08/21 18:16		1
Chloroform	ND		1.0	ug/L		04/08/21 18:16		1
Chloromethane	ND		1.0	ug/L		04/08/21 18:16		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		04/08/21 18:16		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		04/08/21 18:16		1
Dibromochloromethane	ND		1.0	ug/L		04/08/21 18:16		1
Dibromomethane	ND		1.0	ug/L		04/08/21 18:16		1
Dichlorodifluoromethane	ND		1.0	ug/L		04/08/21 18:16		1
Ethylbenzene	ND		1.0	ug/L		04/08/21 18:16		1
Hexachlorobutadiene	ND		1.0	ug/L		04/08/21 18:16		1
Isopropyl alcohol	ND		250	ug/L		04/08/21 18:16		1
Isopropylbenzene	ND		1.0	ug/L		04/08/21 18:16		1
m,p-Xylene	ND		1.0	ug/L		04/08/21 18:16		1
Methylene Chloride	ND		5.0	ug/L		04/08/21 18:16		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		04/08/21 18:16		1

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** MB 440-643528/5

**Matrix:** Water

**Analysis Batch:** 643528

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB	MB	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier								
Naphthalene	ND				1.0	ug/L			04/08/21 18:16	1
n-Butylbenzene	ND				1.0	ug/L			04/08/21 18:16	1
N-Propylbenzene	ND				1.0	ug/L			04/08/21 18:16	1
o-Xylene	ND				1.0	ug/L			04/08/21 18:16	1
p-Isopropyltoluene	ND				1.0	ug/L			04/08/21 18:16	1
sec-Butylbenzene	ND				1.0	ug/L			04/08/21 18:16	1
Styrene	ND				1.0	ug/L			04/08/21 18:16	1
tert-Butylbenzene	ND				1.0	ug/L			04/08/21 18:16	1
Tetrachloroethene	ND				1.0	ug/L			04/08/21 18:16	1
Toluene	ND				1.0	ug/L			04/08/21 18:16	1
trans-1,2-Dichloroethene	ND				1.0	ug/L			04/08/21 18:16	1
trans-1,3-Dichloropropene	ND				0.50	ug/L			04/08/21 18:16	1
Trichloroethene	ND				1.0	ug/L			04/08/21 18:16	1
Trichlorofluoromethane	ND				1.0	ug/L			04/08/21 18:16	1
Vinyl chloride	ND				0.50	ug/L			04/08/21 18:16	1
Surrogate	MB	MB	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac	
	%Recovery	Qualifier								
1,2-Dichloroethane-d4 (Surr)	111				70 - 130				04/08/21 18:16	1
4-Bromofluorobenzene (Surr)	110				80 - 120				04/08/21 18:16	1
Dibromofluoromethane (Surr)	109				76 - 132				04/08/21 18:16	1
Toluene-d8 (Surr)	93				80 - 128				04/08/21 18:16	1

**Lab Sample ID:** LCS 440-643528/1002

**Matrix:** Water

**Analysis Batch:** 643528

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits	%Rec.
		Result	Qualifier					
1,1,1,2-Tetrachloroethane	25.0	25.4		ug/L		102	60 - 141	
1,1,1-Trichloroethane	25.0	23.5		ug/L		94	70 - 130	
1,1,2,2-Tetrachloroethane	25.0	24.2		ug/L		97	63 - 130	
1,1,2-Trichloroethane	25.0	22.9		ug/L		92	70 - 130	
1,1-Dichloroethane	25.0	24.9		ug/L		100	64 - 130	
1,1-Dichloroethene	25.0	22.7		ug/L		91	70 - 130	
1,1-Dichloropropene	25.0	21.7		ug/L		87	70 - 130	
1,2,3-Trichlorobenzene	25.0	25.7		ug/L		103	60 - 140	
1,2,3-Trichloropropane	25.0	23.9		ug/L		96	63 - 130	
1,2,4-Trichlorobenzene	25.0	23.7		ug/L		95	60 - 140	
1,2,4-Trimethylbenzene	25.0	23.2		ug/L		93	70 - 135	
1,2-Dibromo-3-Chloropropane	25.0	24.0		ug/L		96	52 - 140	
1,2-Dibromoethane (EDB)	25.0	22.7		ug/L		91	70 - 130	
1,2-Dichlorobenzene	25.0	23.9		ug/L		95	70 - 130	
1,2-Dichloroethane	25.0	23.4		ug/L		94	57 - 138	
1,2-Dichloropropane	25.0	25.1		ug/L		100	67 - 130	
1,3,5-Trimethylbenzene	25.0	22.8		ug/L		91	70 - 136	
1,3-Dichlorobenzene	25.0	24.6		ug/L		98	70 - 130	
1,3-Dichloropropane	25.0	22.5		ug/L		90	70 - 130	
1,4-Dichlorobenzene	25.0	23.5		ug/L		94	70 - 130	
2,2-Dichloropropane	25.0	23.6		ug/L		94	68 - 141	

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-643528/1002**

**Matrix: Water**

**Analysis Batch: 643528**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chlorotoluene	25.0	22.7		ug/L	91	70 - 130	
4-Chlorotoluene	25.0	22.7		ug/L	91	70 - 130	
Acetone	125	130		ug/L	104	10 - 150	
Benzene	25.0	24.9		ug/L	99	68 - 130	
Bromobenzene	25.0	23.5		ug/L	94	70 - 130	
Bromochloromethane	25.0	25.4		ug/L	102	70 - 130	
Bromodichloromethane	25.0	24.4		ug/L	98	70 - 132	
Bromoform	25.0	26.7		ug/L	107	60 - 148	
Bromomethane	25.0	28.0		ug/L	112	64 - 139	
Carbon tetrachloride	25.0	23.1		ug/L	92	60 - 150	
Chlorobenzene	25.0	24.6		ug/L	99	70 - 130	
Chloroethane	25.0	25.6		ug/L	102	64 - 135	
Chloroform	25.0	24.3		ug/L	97	70 - 130	
Chloromethane	25.0	27.6		ug/L	110	47 - 140	
cis-1,2-Dichloroethene	25.0	24.6		ug/L	99	70 - 133	
cis-1,3-Dichloropropene	25.0	21.6		ug/L	86	70 - 133	
Dibromochloromethane	25.0	23.2		ug/L	93	69 - 145	
Dibromomethane	25.0	25.2		ug/L	101	70 - 130	
Dichlorodifluoromethane	25.0	25.2		ug/L	101	29 - 150	
Ethylbenzene	25.0	22.9		ug/L	92	70 - 130	
Hexachlorobutadiene	25.0	25.2		ug/L	101	10 - 150	
Isopropylbenzene	25.0	24.2		ug/L	97	70 - 136	
m,p-Xylene	25.0	24.2		ug/L	97	70 - 130	
Methylene Chloride	25.0	25.2		ug/L	101	52 - 130	
Methyl-t-Butyl Ether (MTBE)	25.0	21.6		ug/L	86	63 - 131	
Naphthalene	25.0	22.8		ug/L	91	60 - 140	
n-Butylbenzene	25.0	23.8		ug/L	95	65 - 150	
N-Propylbenzene	25.0	22.0		ug/L	88	67 - 139	
o-Xylene	25.0	25.6		ug/L	102	70 - 130	
p-Isopropyltoluene	25.0	23.8		ug/L	95	70 - 132	
sec-Butylbenzene	25.0	23.4		ug/L	93	70 - 138	
Styrene	25.0	23.7		ug/L	95	70 - 134	
tert-Butylbenzene	25.0	21.8		ug/L	87	70 - 130	
Tetrachloroethene	25.0	21.6		ug/L	87	70 - 130	
Toluene	25.0	21.4		ug/L	86	70 - 130	
trans-1,2-Dichloroethene	25.0	22.8		ug/L	91	70 - 130	
trans-1,3-Dichloropropene	25.0	21.2		ug/L	85	70 - 132	
Trichloroethene	25.0	23.4		ug/L	93	70 - 130	
Trichlorofluoromethane	25.0	23.1		ug/L	93	60 - 150	
Vinyl chloride	25.0	25.7		ug/L	103	59 - 133	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	104		76 - 132
Toluene-d8 (Surr)	89		80 - 128

Eurofins Calscience Irvine

# QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-643528/1004**

**Matrix: Water**

**Analysis Batch: 643528**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	ND		ug/L	64		49 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	97		76 - 132
Toluene-d8 (Surr)	98		80 - 128

**Lab Sample ID: 550-161388-A-2 MS**

**Matrix: Water**

**Analysis Batch: 643528**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		100	98.7		ug/L	99	60 - 149	
1,1,1-Trichloroethane	ND		100	99.9		ug/L	100	70 - 130	
1,1,2,2-Tetrachloroethane	ND		100	101		ug/L	101	63 - 130	
1,1,2-Trichloroethane	ND		100	97.7		ug/L	98	70 - 130	
1,1-Dichloroethane	ND		100	99.2		ug/L	99	65 - 130	
1,1-Dichloroethene	ND		100	100		ug/L	100	70 - 130	
1,1-Dichloropropene	ND		100	102		ug/L	102	64 - 130	
1,2,3-Trichlorobenzene	ND		100	98.3		ug/L	98	60 - 140	
1,2,3-Trichloropropane	ND		100	97.1		ug/L	97	60 - 130	
1,2,4-Trichlorobenzene	ND		100	94.3		ug/L	94	60 - 140	
1,2,4-Trimethylbenzene	ND		100	93.7		ug/L	94	70 - 130	
1,2-Dibromo-3-Chloropropane	ND		100	95.0		ug/L	95	48 - 140	
1,2-Dibromoethane (EDB)	ND		100	99.5		ug/L	99	70 - 131	
1,2-Dichlorobenzene	ND		100	97.9		ug/L	98	70 - 130	
1,2-Dichloroethane	ND		100	91.3		ug/L	91	56 - 146	
1,2-Dichloropropane	ND		100	106		ug/L	106	69 - 130	
1,3,5-Trimethylbenzene	ND		100	87.2		ug/L	87	70 - 130	
1,3-Dichlorobenzene	ND		100	97.1		ug/L	97	70 - 130	
1,3-Dichloropropane	ND		100	93.8		ug/L	94	70 - 130	
1,4-Dichlorobenzene	ND		100	94.7		ug/L	95	70 - 130	
2,2-Dichloropropane	ND		100	95.5		ug/L	96	69 - 138	
2-Chlorotoluene	ND		100	88.3		ug/L	88	70 - 130	
4-Chlorotoluene	ND		100	88.8		ug/L	89	70 - 130	
Acetone	110		500	540		ug/L	86	10 - 150	
Benzene	ND		100	103		ug/L	103	66 - 130	
Bromobenzene	ND		100	91.7		ug/L	92	70 - 130	
Bromochloromethane	ND		100	102		ug/L	102	70 - 130	
Bromodichloromethane	ND		100	98.4		ug/L	98	70 - 138	
Bromoform	ND		100	96.1		ug/L	96	59 - 150	
Bromomethane	ND		100	112		ug/L	112	62 - 131	
Carbon tetrachloride	ND		100	99.7		ug/L	100	60 - 150	
Chlorobenzene	ND		100	95.5		ug/L	96	70 - 130	
Chloroethane	ND		100	106		ug/L	106	68 - 130	
Chloroform	ND		100	98.4		ug/L	98	70 - 130	
Chloromethane	ND		100	114		ug/L	114	39 - 144	

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 550-161388-A-2 MS**

**Matrix: Water**

**Analysis Batch: 643528**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
cis-1,2-Dichloroethene	ND		100	104		ug/L		104	70 - 130
cis-1,3-Dichloropropene	ND		100	92.4		ug/L		92	70 - 133
Dibromochloromethane	ND		100	94.9		ug/L		95	70 - 148
Dibromomethane	ND		100	102		ug/L		102	70 - 130
Dichlorodifluoromethane	ND		100	119		ug/L		119	25 - 142
Ethylbenzene	ND		100	88.0		ug/L		88	70 - 130
Hexachlorobutadiene	ND		100	109		ug/L		109	10 - 150
Isopropyl alcohol	ND F1		2500	ND F1		ug/L		0	46 - 142
Isopropylbenzene	ND		100	89.4		ug/L		89	70 - 132
m,p-Xylene	ND		100	87.7		ug/L		88	70 - 133
Methylene Chloride	ND		100	103		ug/L		103	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		100	80.3		ug/L		80	70 - 130
Naphthalene	ND		100	86.4		ug/L		86	60 - 140
n-Butylbenzene	ND		100	97.7		ug/L		98	61 - 149
N-Propylbenzene	ND		100	87.9		ug/L		88	66 - 135
o-Xylene	ND		100	94.8		ug/L		95	70 - 133
p-Isopropyltoluene	ND		100	96.4		ug/L		96	70 - 130
sec-Butylbenzene	ND		100	95.1		ug/L		95	67 - 134
Styrene	ND		100	89.4		ug/L		89	29 - 150
tert-Butylbenzene	ND		100	86.4		ug/L		86	70 - 130
Tetrachloroethene	ND		100	123		ug/L		123	70 - 137
Toluene	ND		100	93.1		ug/L		93	70 - 130
trans-1,2-Dichloroethene	ND		100	94.6		ug/L		95	70 - 130
trans-1,3-Dichloropropene	ND		100	91.4		ug/L		91	70 - 138
Trichloroethene	ND		100	99.0		ug/L		99	70 - 130
Trichlorofluoromethane	ND		100	98.2		ug/L		98	60 - 150
Vinyl chloride	ND		100	116		ug/L		116	50 - 137

Surrogate	MS	MS	Limits
	Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	101		70 - 130
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	103		76 - 132
Toluene-d8 (Surr)	96		80 - 128

**Lab Sample ID: 550-161388-A-2 MSD**

**Matrix: Water**

**Analysis Batch: 643528**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	ND		100	103		ug/L		103	60 - 149	4	20
1,1,1-Trichloroethane	ND		100	91.1		ug/L		91	70 - 130	9	20
1,1,2,2-Tetrachloroethane	ND		100	101		ug/L		101	63 - 130	1	30
1,1,2-Trichloroethane	ND		100	98.5		ug/L		98	70 - 130	1	25
1,1-Dichloroethane	ND		100	89.4		ug/L		89	65 - 130	10	20
1,1-Dichloroethene	ND		100	85.2		ug/L		85	70 - 130	16	20
1,1-Dichloropropene	ND		100	95.6		ug/L		96	64 - 130	7	20
1,2,3-Trichlorobenzene	ND		100	102		ug/L		102	60 - 140	3	20
1,2,3-Trichloropropane	ND		100	92.0		ug/L		92	60 - 130	5	30

Eurofins Calscience Irvine

# QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 550-161388-A-2 MSD**

**Matrix: Water**

**Analysis Batch: 643528**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	ND		100	96.6		ug/L	97	60 - 140		2	20
1,2,4-Trimethylbenzene	ND		100	95.0		ug/L	95	70 - 130		1	25
1,2-Dibromo-3-Chloropropane	ND		100	91.1		ug/L	91	48 - 140		4	30
1,2-Dibromoethane (EDB)	ND		100	98.7		ug/L	99	70 - 131		1	25
1,2-Dichlorobenzene	ND		100	98.0		ug/L	98	70 - 130		0	20
1,2-Dichloroethane	ND		100	85.1		ug/L	85	56 - 146		7	20
1,2-Dichloropropane	ND		100	100		ug/L	100	69 - 130		6	20
1,3,5-Trimethylbenzene	ND		100	90.4		ug/L	90	70 - 130		4	20
1,3-Dichlorobenzene	ND		100	98.8		ug/L	99	70 - 130		2	20
1,3-Dichloropropane	ND		100	97.8		ug/L	98	70 - 130		4	25
1,4-Dichlorobenzene	ND		100	94.8		ug/L	95	70 - 130		0	20
2,2-Dichloropropane	ND		100	88.5		ug/L	88	69 - 138		8	25
2-Chlorotoluene	ND		100	89.7		ug/L	90	70 - 130		2	20
4-Chlorotoluene	ND		100	91.0		ug/L	91	70 - 130		2	20
Acetone	110		500	605		ug/L	99	10 - 150		11	35
Benzene	ND		100	99.7		ug/L	100	66 - 130		4	20
Bromobenzene	ND		100	93.5		ug/L	94	70 - 130		2	20
Bromochloromethane	ND		100	87.7		ug/L	88	70 - 130		15	25
Bromodichloromethane	ND		100	99.3		ug/L	99	70 - 138		1	20
Bromoform	ND		100	99.0		ug/L	99	59 - 150		3	25
Bromomethane	ND		100	101		ug/L	101	62 - 131		11	25
Carbon tetrachloride	ND		100	94.5		ug/L	95	60 - 150		5	25
Chlorobenzene	ND		100	101		ug/L	101	70 - 130		5	20
Chloroethane	ND		100	97.7		ug/L	98	68 - 130		8	25
Chloroform	ND		100	89.6		ug/L	90	70 - 130		9	20
Chloromethane	ND		100	102		ug/L	102	39 - 144		11	25
cis-1,2-Dichloroethene	ND		100	93.2		ug/L	93	70 - 130		11	20
cis-1,3-Dichloropropene	ND		100	95.7		ug/L	96	70 - 133		3	20
Dibromochloromethane	ND		100	99.5		ug/L	100	70 - 148		5	25
Dibromomethane	ND		100	101		ug/L	101	70 - 130		1	25
Dichlorodifluoromethane	ND		100	103		ug/L	103	25 - 142		15	30
Ethylbenzene	ND		100	92.1		ug/L	92	70 - 130		5	20
Hexachlorobutadiene	ND		100	112		ug/L	112	10 - 150		3	20
Isopropyl alcohol	ND	F1	2500	2650		ug/L	106	46 - 142		NC	40
Isopropylbenzene	ND		100	95.6		ug/L	96	70 - 132		7	20
m,p-Xylene	ND		100	92.8		ug/L	93	70 - 133		6	25
Methylene Chloride	ND		100	90.4		ug/L	90	52 - 130		13	20
Methyl-t-Butyl Ether (MTBE)	ND		100	74.3		ug/L	74	70 - 130		8	25
Naphthalene	ND		100	87.3		ug/L	87	60 - 140		1	30
n-Butylbenzene	ND		100	97.7		ug/L	98	61 - 149		0	20
N-Propylbenzene	ND		100	87.4		ug/L	87	66 - 135		1	20
o-Xylene	ND		100	99.5		ug/L	99	70 - 133		5	20
p-Isopropyltoluene	ND		100	97.7		ug/L	98	70 - 130		1	20
sec-Butylbenzene	ND		100	96.5		ug/L	97	67 - 134		1	20
Styrene	ND		100	94.2		ug/L	94	29 - 150		5	35
tert-Butylbenzene	ND		100	89.6		ug/L	90	70 - 130		4	20
Tetrachloroethene	ND		100	135		ug/L	135	70 - 137		9	20
Toluene	ND		100	97.5		ug/L	97	70 - 130		5	20
trans-1,2-Dichloroethene	ND		100	86.1		ug/L	86	70 - 130		9	20

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 550-161388-A-2 MSD**

**Matrix: Water**

**Analysis Batch: 643528**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,3-Dichloropropene	ND		100	93.9		ug/L	94	70 - 138	3	25	
Trichloroethene	ND		100	102		ug/L	102	70 - 130	3	20	
Trichlorofluoromethane	ND		100	87.7		ug/L	88	60 - 150	11	25	
Vinyl chloride	ND		100	104		ug/L	104	50 - 137	10	30	
<hr/>											
Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits								
1,2-Dichloroethane-d4 (Surr)	90		70 - 130								
4-Bromofluorobenzene (Surr)	92		80 - 120								
Dibromofluoromethane (Surr)	94		76 - 132								
Toluene-d8 (Surr)	99		80 - 128								

**Lab Sample ID: MB 440-643633/5**

**Matrix: Water**

**Analysis Batch: 643633**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		1.0	ug/L			04/09/21 18:49	1
<hr/>								
<b>Surrogate</b>								
Surrogate	MB %Recovery	MB Qualifier	MB Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		70 - 130				04/09/21 18:49	1
4-Bromofluorobenzene (Surr)	93		80 - 120				04/09/21 18:49	1
Dibromofluoromethane (Surr)	113		76 - 132				04/09/21 18:49	1
Toluene-d8 (Surr)	103		80 - 128				04/09/21 18:49	1

**Lab Sample ID: LCS 440-643633/1002**

**Matrix: Water**

**Analysis Batch: 643633**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Tetrachloroethene		25.0	25.0		ug/L	100	70 - 130		
<hr/>									
<b>Surrogate</b>									
Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits						
1,2-Dichloroethane-d4 (Surr)	100		70 - 130						
4-Bromofluorobenzene (Surr)	86		80 - 120						
Dibromofluoromethane (Surr)	104		76 - 132						
Toluene-d8 (Surr)	106		80 - 128						

**Lab Sample ID: LCSD 440-643633/3**

**Matrix: Water**

**Analysis Batch: 643633**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte		Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane		25.0	25.3		ug/L	101	60 - 141	5	20	
1,1,1-Trichloroethane		25.0	23.5		ug/L	94	70 - 130	2	20	
1,1,2,2-Tetrachloroethane		25.0	23.8		ug/L	95	63 - 130	9	25	
1,1,2-Trichloroethane		25.0	25.6		ug/L	102	70 - 130	2	20	
1,1-Dichloroethane		25.0	23.4		ug/L	94	64 - 130	4	20	
1,1-Dichloroethene		25.0	20.5		ug/L	82	70 - 130	6	20	

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 440-643633/3**

**Matrix: Water**

**Analysis Batch: 643633**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	Limit
1,1-Dichloropropene	25.0	21.6		ug/L	87	70 - 130	3	20	
1,2,3-Trichlorobenzene	25.0	26.0		ug/L	104	60 - 140	1	20	
1,2,3-Trichloropropane	25.0	23.6		ug/L	94	63 - 130	11	20	
1,2,4-Trichlorobenzene	25.0	24.5		ug/L	98	60 - 140	2	20	
1,2,4-Trimethylbenzene	25.0	23.9		ug/L	95	70 - 135	0	20	
1,2-Dibromo-3-Chloropropane	25.0	23.0		ug/L	92	52 - 140	2	30	
1,2-Dibromoethane (EDB)	25.0	25.1		ug/L	100	70 - 130	7	20	
1,2-Dichlorobenzene	25.0	24.1		ug/L	96	70 - 130	0	20	
1,2-Dichloroethane	25.0	22.6		ug/L	91	57 - 138	2	20	
1,2-Dichloropropane	25.0	24.5		ug/L	98	67 - 130	4	20	
1,3,5-Trimethylbenzene	25.0	23.2		ug/L	93	70 - 136	1	20	
1,3-Dichlorobenzene	25.0	24.6		ug/L	98	70 - 130	1	20	
1,3-Dichloropropane	25.0	25.0		ug/L	100	70 - 130	6	20	
1,4-Dichlorobenzene	25.0	23.7		ug/L	95	70 - 130	0	20	
2,2-Dichloropropane	25.0	23.8		ug/L	95	68 - 141	2	25	
2-Chlorotoluene	25.0	22.4		ug/L	90	70 - 130	0	20	
4-Chlorotoluene	25.0	23.0		ug/L	92	70 - 130	0	20	
Acetone	125	118		ug/L	94	10 - 150	8	30	
Benzene	25.0	24.2		ug/L	97	68 - 130	2	20	
Bromobenzene	25.0	23.6		ug/L	94	70 - 130	13	20	
Bromochloromethane	25.0	25.6		ug/L	102	70 - 130	3	20	
Bromodichloromethane	25.0	24.2		ug/L	97	70 - 132	4	20	
Bromoform	25.0	26.4		ug/L	106	60 - 148	6	25	
Bromomethane	25.0	24.6		ug/L	98	64 - 139	10	20	
Carbon tetrachloride	25.0	22.6		ug/L	90	60 - 150	1	25	
Chlorobenzene	25.0	24.6		ug/L	99	70 - 130	5	20	
Chloroethane	25.0	22.4		ug/L	90	64 - 135	8	20	
Chloroform	25.0	24.1		ug/L	96	70 - 130	1	20	
Chloromethane	25.0	23.5		ug/L	94	47 - 140	9	25	
cis-1,2-Dichloroethene	25.0	25.1		ug/L	100	70 - 133	1	20	
cis-1,3-Dichloropropene	25.0	24.0		ug/L	96	70 - 133	5	25	
Dibromochloromethane	25.0	25.8		ug/L	103	69 - 145	6	20	
Dibromomethane	25.0	24.9		ug/L	100	70 - 130	3	20	
Dichlorodifluoromethane	25.0	19.8		ug/L	79	29 - 150	8	30	
Ethylbenzene	25.0	23.1		ug/L	93	70 - 130	5	20	
Hexachlorobutadiene	25.0	25.5		ug/L	102	10 - 150	1	20	
Isopropylbenzene	25.0	24.2		ug/L	97	70 - 136	7	20	
m,p-Xylene	25.0	24.5		ug/L	98	70 - 130	3	20	
Methylene Chloride	25.0	22.8		ug/L	91	52 - 130	10	20	
Methyl-t-Butyl Ether (MTBE)	25.0	20.4		ug/L	82	63 - 131	8	25	
Naphthalene	25.0	23.6		ug/L	94	60 - 140	3	25	
n-Butylbenzene	25.0	24.1		ug/L	96	65 - 150	3	20	
N-Propylbenzene	25.0	22.1		ug/L	88	67 - 139	1	20	
o-Xylene	25.0	25.6		ug/L	102	70 - 130	5	20	
p-Isopropyltoluene	25.0	23.9		ug/L	95	70 - 132	0	20	
sec-Butylbenzene	25.0	23.3		ug/L	93	70 - 138	2	20	
Styrene	25.0	24.3		ug/L	97	70 - 134	3	20	
tert-Butylbenzene	25.0	22.3		ug/L	89	70 - 130	3	20	
Tetrachloroethene	25.0	24.2		ug/L	97	70 - 130	3	20	

Eurofins Calscience Irvine

# QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCSD 440-643633/3

**Matrix:** Water

**Analysis Batch:** 643633

**Client Sample ID:** Lab Control Sample Dup  
**Prep Type:** Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene	25.0	23.8		ug/L		95	70 - 130	6	20
trans-1,2-Dichloroethene	25.0	21.1		ug/L		84	70 - 130	8	20
trans-1,3-Dichloropropene	25.0	24.3		ug/L		97	70 - 132	4	20
Trichloroethene	25.0	23.6		ug/L		95	70 - 130	1	20
Trichlorofluoromethane	25.0	19.8		ug/L		79	60 - 150	9	20
Vinyl chloride	25.0	22.3		ug/L		89	59 - 133	8	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	104		76 - 132
Toluene-d8 (Surr)	99		80 - 128

**Lab Sample ID:** 550-161305-A-3 MS

**Matrix:** Water

**Analysis Batch:** 643633

**Client Sample ID:** Matrix Spike  
**Prep Type:** Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	ND		10.0	10.4		ug/L		104	70 - 137
<b>Surrogate</b>									
1,2-Dichloroethane-d4 (Surr)									
98									
70 - 130									
4-Bromofluorobenzene (Surr)									
86									
80 - 120									
Dibromofluoromethane (Surr)									
103									
76 - 132									
Toluene-d8 (Surr)									
96									
80 - 128									

**Lab Sample ID:** 550-161305-A-3 MSD

**Matrix:** Water

**Analysis Batch:** 643633

**Client Sample ID:** Matrix Spike Duplicate  
**Prep Type:** Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene	ND		10.0	11.3		ug/L		113	70 - 137	8	20
<b>Surrogate</b>											
1,2-Dichloroethane-d4 (Surr)											
99											
70 - 130											
4-Bromofluorobenzene (Surr)											
86											
80 - 120											
Dibromofluoromethane (Surr)											
105											
76 - 132											
Toluene-d8 (Surr)											
98											
80 - 128											

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID:** MB 440-643788/1-A

**Matrix:** Water

**Analysis Batch:** 643911

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA  
**Prep Batch:** 643788

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	ug/L		04/12/21 17:55	04/13/21 19:36	1

Eurofins Calscience Irvine

# QC Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-281561-1

Project/Site: Omega Chemical - GWCSW Monthly

SDG: Omega Chemical

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID:** MB 440-643788/1-A

**Matrix:** Water

**Analysis Batch:** 643911

Surrogate	MB	MB	%Recovery	Qualifier	Limits
1,4-Dioxane-d8 (Surr)			44		27 - 120

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 643788

**Lab Sample ID:** LCS 440-643788/3-A

**Matrix:** Water

**Analysis Batch:** 643911

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
1,4-Dioxane	2.00	1.10		ug/L	55	36 - 120	
<b>Surrogate</b>		<b>LCS</b>	<b>LCS</b>				
Surrogate	%Recovery	Qualifier	Limits	Unit	D	%Rec.	Limits
	54		27 - 120				

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 643788

%Rec.

**Lab Sample ID:** LCSD 440-643788/4-A

**Matrix:** Water

**Analysis Batch:** 643911

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec.	RPD
	Added	Result	Qualifier				
1,4-Dioxane	2.00	0.789		ug/L	39	36 - 120	33
<b>Surrogate</b>		<b>LCSD</b>	<b>LCSD</b>				
Surrogate	%Recovery	Qualifier	Limits	Unit	D	Limits	RPD
	40		27 - 120				

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

**Prep Batch:** 643788

%Rec.

# QC Association Summary

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1  
 SDG: Omega Chemical

## GC/MS VOA

### Analysis Batch: 643528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-281561-1	OC_SP220B_EFF_040621	Total/NA	Water	8260B	
440-281561-2	OC_SP210_INF_040621	Total/NA	Water	8260B	
440-281561-3	OC_TB_040621	Total/NA	Water	8260B	
MB 440-643528/5	Method Blank	Total/NA	Water	8260B	
LCS 440-643528/1002	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-643528/1004	Lab Control Sample	Total/NA	Water	8260B	
550-161388-A-2 MS	Matrix Spike	Total/NA	Water	8260B	
550-161388-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 643633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-281561-2 - DL	OC_SP210_INF_040621	Total/NA	Water	8260B	
MB 440-643633/5	Method Blank	Total/NA	Water	8260B	
LCS 440-643633/1002	Lab Control Sample	Total/NA	Water	8260B	
LCSD 440-643633/3	Lab Control Sample Dup	Total/NA	Water	8260B	
550-161305-A-3 MS	Matrix Spike	Total/NA	Water	8260B	
550-161305-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 643788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-281561-1	OC_SP220B_EFF_040621	Total/NA	Water	3520C	
MB 440-643788/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-643788/3-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-643788/4-A	Lab Control Sample Dup	Total/NA	Water	3520C	

### Analysis Batch: 643911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-643788/1-A	Method Blank	Total/NA	Water	8270C SIM	643788
LCS 440-643788/3-A	Lab Control Sample	Total/NA	Water	8270C SIM	643788
LCSD 440-643788/4-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	643788

### Analysis Batch: 643998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-281561-1	OC_SP220B_EFF_040621	Total/NA	Water	8270C SIM	643788

# Definitions/Glossary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

## Glossary

**Abbreviation** These commonly used abbreviations may or may not be present in this report.

¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - GWCSW Monthly

Job ID: 440-281561-1

SDG: Omega Chemical

## Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	1,1-Dichloropropene
8260B		Water	1,2,3-Trichlorobenzene
8260B		Water	1,2,4-Trimethylbenzene
8260B		Water	1,3,5-Trimethylbenzene
8260B		Water	1,3-Dichloropropane
8260B		Water	2,2-Dichloropropane
8260B		Water	2-Chlorotoluene
8260B		Water	Acetone
8260B		Water	Isopropyl alcohol
8260B		Water	Isopropylbenzene
8260B		Water	m,p-Xylene
8260B		Water	p-Isopropyltoluene
8270C SIM	3520C	Water	1,4-Dioxane



## Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-281561-1  
SDG Number: Omega Chemical

**Login Number: 281561**

**List Source: Eurofins Irvine**

**List Number: 1**

**Creator: Escalante, Maria I**

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True		
The cooler's custody seal, if present, is intact.	N/A	Not present	
Sample custody seals, if present, are intact.	N/A	Not Present	
The cooler or samples do not appear to have been compromised or tampered with.	True		
Samples were received on ice.	True		
Cooler Temperature is acceptable.	True		
Cooler Temperature is recorded.	True		
COC is present.	True		
COC is filled out in ink and legible.	True		
COC is filled out with all pertinent information.	True		
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.	
There are no discrepancies between the containers received and the COC.	True		
Samples are received within Holding Time (excluding tests with immediate HTs)	True		
Sample containers have legible labels.	True		
Containers are not broken or leaking.	True		
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	N/A		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		
Residual Chlorine Checked.	N/A		



Environment Testing  
America



## ANALYTICAL REPORT

Eurofins Calscience Irvine  
17461 Derian Ave  
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Irvine, CA 92614-5817  
Tel: (949)261-1022

Laboratory Job ID: 440-282663-1

Laboratory Sample Delivery Group: Omega Chemical  
Client Project/Site: Omega Chemical - GWCS Monthly

For:

Jacob & Hefner Associates P.C.  
15375 Barranca Parkway, J-101  
Irvine, California 92618

Attn: Trent Henderson

Danielle Roberts

Authorized for release by:  
5/10/2021 9:14:34 AM

Danielle Roberts, Senior Project Manager  
(949)260-3249  
[Danielle.Roberts@Eurofinset.com](mailto:Danielle.Roberts@Eurofinset.com)

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Sample Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-282663-1	OC_SP220B_EFF_050321	Water	05/03/21 11:03	05/03/21 14:04	
440-282663-2	OC_SP210_INF_050321	Water	05/03/21 11:12	05/03/21 14:04	

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# Case Narrative

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
SDG: Omega Chemical

## Job ID: 440-282663-1

### Laboratory: Eurofins Calscience Irvine

#### Narrative

Job Narrative  
440-282663-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 5/3/2021 2:04 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 9.7° C.

#### Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: OC\_SP220B\_EFF\_050321 (440-282663-1), OC\_SP210\_INF\_050321 (440-282663-2) and OC\_TB\_050321 (440-282663-3). The sample(s) is considered acceptable since it was collected and submitted to the laboratory on the same day and there is evidence that the chilling process has begun. Samples were received at 10.0/9.7 deg C on ice.

#### GC/MS VOA

Method 8260B: The continuing calibration verification (CCV) associated with batch 440-645828 recovered above the upper control limit for Vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: OC\_SP220B\_EFF\_050321 (440-282663-1), OC\_SP210\_INF\_050321 (440-282663-2) and (CCVIS 440-645828/2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

Method 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-645498. A laboratory control sample duplicate (LCSD) was extracted to provide precision data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

## Detection Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
SDG: Omega Chemical

**Client Sample ID: OC\_SP220B\_EFF\_050321**

**Lab Sample ID: 440-282663-1**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	8.1		0.48	ug/L	1		8270C SIM	Total/NA

**Client Sample ID: OC\_SP210\_INF\_050321**

**Lab Sample ID: 440-282663-2**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	59		5.0	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	11		1.0	ug/L	1		8260B	Total/NA
Chloroform	4.1		1.0	ug/L	1		8260B	Total/NA
Trichloroethylene	11		1.0	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	9.1		1.0	ug/L	1		8260B	Total/NA
Tetrachloroethylene - DL	98		5.0	ug/L	5		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
 SDG: Omega Chemical

**Client Sample ID: OC\_SP220B\_EFF\_050321**

**Lab Sample ID: 440-282663-1**

**Matrix: Water**

Date Collected: 05/03/21 11:03

Date Received: 05/03/21 14:04

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		05/06/21 18:01		1
1,1,1-Trichloroethane	ND		1.0	ug/L		05/06/21 18:01		1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		05/06/21 18:01		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L		05/06/21 18:01		1
1,1,2-Trichloroethane	ND		1.0	ug/L		05/06/21 18:01		1
1,1-Dichloroethane	ND		1.0	ug/L		05/06/21 18:01		1
1,1-Dichloroethene	ND		1.0	ug/L		05/06/21 18:01		1
1,1-Dichloropropene	ND		1.0	ug/L		05/06/21 18:01		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		05/06/21 18:01		1
1,2,3-Trichloropropane	ND		1.0	ug/L		05/06/21 18:01		1
1,2,4-Trichlorobenzene	ND		1.0	ug/L		05/06/21 18:01		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		05/06/21 18:01		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		05/06/21 18:01		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		05/06/21 18:01		1
1,2-Dichlorobenzene	ND		1.0	ug/L		05/06/21 18:01		1
1,2-Dichloroethane	ND		1.0	ug/L		05/06/21 18:01		1
1,2-Dichloropropene	ND		1.0	ug/L		05/06/21 18:01		1
1,3,5-Trimethylbenzene	ND		1.0	ug/L		05/06/21 18:01		1
1,3-Dichlorobenzene	ND		1.0	ug/L		05/06/21 18:01		1
1,3-Dichloropropane	ND		1.0	ug/L		05/06/21 18:01		1
1,4-Dichlorobenzene	ND		1.0	ug/L		05/06/21 18:01		1
2,2-Dichloropropane	ND		1.0	ug/L		05/06/21 18:01		1
2-Chlorotoluene	ND		1.0	ug/L		05/06/21 18:01		1
4-Chlorotoluene	ND		1.0	ug/L		05/06/21 18:01		1
Acetone	ND		10	ug/L		05/06/21 18:01		1
Benzene	ND		0.50	ug/L		05/06/21 18:01		1
Bromobenzene	ND		1.0	ug/L		05/06/21 18:01		1
Bromochloromethane	ND		1.0	ug/L		05/06/21 18:01		1
Bromodichloromethane	ND		1.0	ug/L		05/06/21 18:01		1
Bromoform	ND		1.0	ug/L		05/06/21 18:01		1
Bromomethane	ND		1.0	ug/L		05/06/21 18:01		1
Carbon tetrachloride	ND		0.50	ug/L		05/06/21 18:01		1
Chlorobenzene	ND		1.0	ug/L		05/06/21 18:01		1
Chloroethane	ND		1.0	ug/L		05/06/21 18:01		1
Chloroform	ND		1.0	ug/L		05/06/21 18:01		1
Chloromethane	ND		1.0	ug/L		05/06/21 18:01		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		05/06/21 18:01		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		05/06/21 18:01		1
Dibromochloromethane	ND		1.0	ug/L		05/06/21 18:01		1
Dibromomethane	ND		1.0	ug/L		05/06/21 18:01		1
Dichlorodifluoromethane	ND		1.0	ug/L		05/06/21 18:01		1
Ethylbenzene	ND		1.0	ug/L		05/06/21 18:01		1
Hexachlorobutadiene	ND		1.0	ug/L		05/06/21 18:01		1
Isopropyl alcohol	ND		250	ug/L		05/06/21 18:01		1
Isopropylbenzene	ND		1.0	ug/L		05/06/21 18:01		1
m,p-Xylene	ND		1.0	ug/L		05/06/21 18:01		1
Methylene Chloride	ND		5.0	ug/L		05/06/21 18:01		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		05/06/21 18:01		1
Naphthalene	ND		1.0	ug/L		05/06/21 18:01		1

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# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
 SDG: Omega Chemical

**Client Sample ID: OC\_SP220B\_EFF\_050321**

**Lab Sample ID: 440-282663-1**

Matrix: Water

Date Collected: 05/03/21 11:03

Date Received: 05/03/21 14:04

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	ug/L		05/06/21 18:01		1
N-Propylbenzene	ND		1.0	ug/L		05/06/21 18:01		1
o-Xylene	ND		1.0	ug/L		05/06/21 18:01		1
p-Isopropyltoluene	ND		1.0	ug/L		05/06/21 18:01		1
sec-Butylbenzene	ND		1.0	ug/L		05/06/21 18:01		1
Styrene	ND		1.0	ug/L		05/06/21 18:01		1
tert-Butylbenzene	ND		1.0	ug/L		05/06/21 18:01		1
Tetrachloroethene	ND		1.0	ug/L		05/06/21 18:01		1
Toluene	ND		1.0	ug/L		05/06/21 18:01		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		05/06/21 18:01		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		05/06/21 18:01		1
Trichloroethene	ND		1.0	ug/L		05/06/21 18:01		1
Trichlorofluoromethane	ND		1.0	ug/L		05/06/21 18:01		1
Vinyl chloride	ND		0.50	ug/L		05/06/21 18:01		1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>		<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	100			70 - 130		05/06/21 18:01		1
4-Bromofluorobenzene (Surr)	101			80 - 120		05/06/21 18:01		1
Dibromofluoromethane (Surr)	100			76 - 132		05/06/21 18:01		1
Toluene-d8 (Surr)	105			80 - 128		05/06/21 18:01		1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	8.1		0.48	ug/L		05/03/21 18:40	05/05/21 20:28	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>		<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,4-Dioxane-d8 (Surr)	52			27 - 120		05/03/21 18:40	05/05/21 20:28	1

**Client Sample ID: OC\_SP210\_INF\_050321**

**Lab Sample ID: 440-282663-2**

Matrix: Water

Date Collected: 05/03/21 11:12

Date Received: 05/03/21 14:04

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		05/06/21 18:28		1
1,1,1-Trichloroethane	ND		1.0	ug/L		05/06/21 18:28		1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		05/06/21 18:28		1
<b>1,1,2-Trichloro-1,2,2-trifluoroethane</b>	<b>59</b>		5.0	ug/L		05/06/21 18:28		1
1,1,2-Trichloroethane	ND		1.0	ug/L		05/06/21 18:28		1
1,1-Dichloroethane	ND		1.0	ug/L		05/06/21 18:28		1
<b>1,1-Dichloroethene</b>	<b>11</b>		1.0	ug/L		05/06/21 18:28		1
1,1-Dichloropropene	ND		1.0	ug/L		05/06/21 18:28		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		05/06/21 18:28		1
1,2,3-Trichloropropane	ND		1.0	ug/L		05/06/21 18:28		1
1,2,4-Trichlorobenzene	ND		1.0	ug/L		05/06/21 18:28		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		05/06/21 18:28		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		05/06/21 18:28		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		05/06/21 18:28		1
1,2-Dichlorobenzene	ND		1.0	ug/L		05/06/21 18:28		1
1,2-Dichloroethane	ND		1.0	ug/L		05/06/21 18:28		1

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# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
 SDG: Omega Chemical

**Client Sample ID: OC\_SP210\_INF\_050321**

**Lab Sample ID: 440-282663-2**

**Matrix: Water**

Date Collected: 05/03/21 11:12

Date Received: 05/03/21 14:04

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		1.0	ug/L		05/06/21 18:28		1
1,3,5-Trimethylbenzene	ND		1.0	ug/L		05/06/21 18:28		1
1,3-Dichlorobenzene	ND		1.0	ug/L		05/06/21 18:28		1
1,3-Dichloropropane	ND		1.0	ug/L		05/06/21 18:28		1
1,4-Dichlorobenzene	ND		1.0	ug/L		05/06/21 18:28		1
2,2-Dichloropropane	ND		1.0	ug/L		05/06/21 18:28		1
2-Chlorotoluene	ND		1.0	ug/L		05/06/21 18:28		1
4-Chlorotoluene	ND		1.0	ug/L		05/06/21 18:28		1
Acetone	ND		10	ug/L		05/06/21 18:28		1
Benzene	ND		0.50	ug/L		05/06/21 18:28		1
Bromobenzene	ND		1.0	ug/L		05/06/21 18:28		1
Bromochloromethane	ND		1.0	ug/L		05/06/21 18:28		1
Bromodichloromethane	ND		1.0	ug/L		05/06/21 18:28		1
Bromoform	ND		1.0	ug/L		05/06/21 18:28		1
Bromomethane	ND		1.0	ug/L		05/06/21 18:28		1
Carbon tetrachloride	ND		0.50	ug/L		05/06/21 18:28		1
Chlorobenzene	ND		1.0	ug/L		05/06/21 18:28		1
Chloroethane	ND		1.0	ug/L		05/06/21 18:28		1
<b>Chloroform</b>	<b>4.1</b>		1.0	ug/L		05/06/21 18:28		1
Chloromethane	ND		1.0	ug/L		05/06/21 18:28		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		05/06/21 18:28		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		05/06/21 18:28		1
Dibromochloromethane	ND		1.0	ug/L		05/06/21 18:28		1
Dibromomethane	ND		1.0	ug/L		05/06/21 18:28		1
Dichlorodifluoromethane	ND		1.0	ug/L		05/06/21 18:28		1
Ethylbenzene	ND		1.0	ug/L		05/06/21 18:28		1
Hexachlorobutadiene	ND		1.0	ug/L		05/06/21 18:28		1
Isopropyl alcohol	ND		250	ug/L		05/06/21 18:28		1
Isopropylbenzene	ND		1.0	ug/L		05/06/21 18:28		1
m,p-Xylene	ND		1.0	ug/L		05/06/21 18:28		1
Methylene Chloride	ND		5.0	ug/L		05/06/21 18:28		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		05/06/21 18:28		1
Naphthalene	ND		1.0	ug/L		05/06/21 18:28		1
n-Butylbenzene	ND		1.0	ug/L		05/06/21 18:28		1
N-Propylbenzene	ND		1.0	ug/L		05/06/21 18:28		1
o-Xylene	ND		1.0	ug/L		05/06/21 18:28		1
p-Isopropyltoluene	ND		1.0	ug/L		05/06/21 18:28		1
sec-Butylbenzene	ND		1.0	ug/L		05/06/21 18:28		1
Styrene	ND		1.0	ug/L		05/06/21 18:28		1
tert-Butylbenzene	ND		1.0	ug/L		05/06/21 18:28		1
Toluene	ND		1.0	ug/L		05/06/21 18:28		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		05/06/21 18:28		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		05/06/21 18:28		1
<b>Trichloroethene</b>	<b>11</b>		1.0	ug/L		05/06/21 18:28		1
<b>Trichlorofluoromethane</b>	<b>9.1</b>		1.0	ug/L		05/06/21 18:28		1
Vinyl chloride	ND		0.50	ug/L		05/06/21 18:28		1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	99		70 - 130			05/06/21 18:28		1
4-Bromofluorobenzene (Surr)	102		80 - 120			05/06/21 18:28		1

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# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
 SDG: Omega Chemical

**Client Sample ID: OC\_SP210\_INF\_050321**

**Lab Sample ID: 440-282663-2**

Date Collected: 05/03/21 11:12

Matrix: Water

Date Received: 05/03/21 14:04

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	101		76 - 132		05/06/21 18:28	1
Toluene-d8 (Surr)	104		80 - 128		05/06/21 18:28	1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	98		5.0	ug/L			05/06/21 18:55	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 130				05/06/21 18:55	5
4-Bromofluorobenzene (Surr)	100		80 - 120				05/06/21 18:55	5
Dibromofluoromethane (Surr)	101		76 - 132				05/06/21 18:55	5
Toluene-d8 (Surr)	104		80 - 128				05/06/21 18:55	5

# Surrogate Summary

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-130)	BFB (80-120)	DBFM (76-132)	TOL (80-128)
440-282663-1	OC_SP220B_EFF_050321	100	101	100	105
440-282663-2	OC_SP210_INF_050321	99	102	101	104
440-282663-2 - DL	OC_SP210_INF_050321	103	100	101	104
440-282767-A-1 MS	Matrix Spike	96	98	99	102
440-282767-A-1 MSD	Matrix Spike Duplicate	101	99	102	99
LCS 440-645828/1002	Lab Control Sample	99	98	102	96
LCS 440-645828/1003	Lab Control Sample	97	98	98	105
MB 440-645828/4	Method Blank	100	101	99	103

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)  
 BFB = 4-Bromofluorobenzene (Surr)  
 DBFM = Dibromofluoromethane (Surr)  
 TOL = Toluene-d8 (Surr)

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DXE (27-120)			
440-282663-1	OC_SP220B_EFF_050321	52			
LCS 440-645498/3-A	Lab Control Sample	50			
LCSD 440-645498/4-A	Lab Control Sample Dup	48			
MB 440-645498/1-A	Method Blank	47			

### Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

## Method Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

# Lab Chronicle

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
SDG: Omega Chemical

**Client Sample ID: OC\_SP220B\_EFF\_050321**

**Lab Sample ID: 440-282663-1**

**Matrix: Water**

Date Collected: 05/03/21 11:03

Date Received: 05/03/21 14:04

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	645828	05/06/21 18:01	K6MO	TAL IRV
Total/NA	Prep	3520C			1050 mL	1 mL	645498	05/03/21 18:40	AR4F	TAL IRV
Total/NA	Analysis	8270C SIM		1			645763	05/05/21 20:28	AR4F	TAL IRV

**Client Sample ID: OC\_SP210\_INF\_050321**

**Lab Sample ID: 440-282663-2**

**Matrix: Water**

Date Collected: 05/03/21 11:12

Date Received: 05/03/21 14:04

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	645828	05/06/21 18:28	K6MO	TAL IRV
Total/NA	Analysis	8260B	DL	5	10 mL	10 mL	645828	05/06/21 18:55	K6MO	TAL IRV

## Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-645828/4**

**Matrix: Water**

**Analysis Batch: 645828**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			05/06/21 09:33	1
1,1,1-Trichloroethane	ND		1.0	ug/L			05/06/21 09:33	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			05/06/21 09:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			05/06/21 09:33	1
1,1,2-Trichloroethane	ND		1.0	ug/L			05/06/21 09:33	1
1,1-Dichloroethane	ND		1.0	ug/L			05/06/21 09:33	1
1,1-Dichloroethene	ND		1.0	ug/L			05/06/21 09:33	1
1,1-Dichloropropene	ND		1.0	ug/L			05/06/21 09:33	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			05/06/21 09:33	1
1,2,3-Trichloropropane	ND		1.0	ug/L			05/06/21 09:33	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			05/06/21 09:33	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			05/06/21 09:33	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			05/06/21 09:33	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			05/06/21 09:33	1
1,2-Dichlorobenzene	ND		1.0	ug/L			05/06/21 09:33	1
1,2-Dichloroethane	ND		1.0	ug/L			05/06/21 09:33	1
1,2-Dichloropropane	ND		1.0	ug/L			05/06/21 09:33	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			05/06/21 09:33	1
1,3-Dichlorobenzene	ND		1.0	ug/L			05/06/21 09:33	1
1,3-Dichloropropane	ND		1.0	ug/L			05/06/21 09:33	1
1,4-Dichlorobenzene	ND		1.0	ug/L			05/06/21 09:33	1
2,2-Dichloropropane	ND		1.0	ug/L			05/06/21 09:33	1
2-Chlorotoluene	ND		1.0	ug/L			05/06/21 09:33	1
4-Chlorotoluene	ND		1.0	ug/L			05/06/21 09:33	1
Acetone	ND		10	ug/L			05/06/21 09:33	1
Benzene	ND		0.50	ug/L			05/06/21 09:33	1
Bromobenzene	ND		1.0	ug/L			05/06/21 09:33	1
Bromochloromethane	ND		1.0	ug/L			05/06/21 09:33	1
Bromodichloromethane	ND		1.0	ug/L			05/06/21 09:33	1
Bromoform	ND		1.0	ug/L			05/06/21 09:33	1
Bromomethane	ND		1.0	ug/L			05/06/21 09:33	1
Carbon tetrachloride	ND		0.50	ug/L			05/06/21 09:33	1
Chlorobenzene	ND		1.0	ug/L			05/06/21 09:33	1
Chloroethane	ND		1.0	ug/L			05/06/21 09:33	1
Chloroform	ND		1.0	ug/L			05/06/21 09:33	1
Chloromethane	ND		1.0	ug/L			05/06/21 09:33	1
cis-1,2-Dichloroethene	ND		1.0	ug/L			05/06/21 09:33	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			05/06/21 09:33	1
Dibromochloromethane	ND		1.0	ug/L			05/06/21 09:33	1
Dibromomethane	ND		1.0	ug/L			05/06/21 09:33	1
Dichlorodifluoromethane	ND		1.0	ug/L			05/06/21 09:33	1
Ethylbenzene	ND		1.0	ug/L			05/06/21 09:33	1
Hexachlorobutadiene	ND		1.0	ug/L			05/06/21 09:33	1
Isopropyl alcohol	ND		250	ug/L			05/06/21 09:33	1
Isopropylbenzene	ND		1.0	ug/L			05/06/21 09:33	1
m,p-Xylene	ND		1.0	ug/L			05/06/21 09:33	1
Methylene Chloride	ND		5.0	ug/L			05/06/21 09:33	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L			05/06/21 09:33	1

Eurofins Calscience Irvine

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-645828/4**

**Matrix: Water**

**Analysis Batch: 645828**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier									
Naphthalene	ND				1.0	ug/L			05/06/21 09:33	1	
n-Butylbenzene	ND				1.0	ug/L			05/06/21 09:33	1	
N-Propylbenzene	ND				1.0	ug/L			05/06/21 09:33	1	
o-Xylene	ND				1.0	ug/L			05/06/21 09:33	1	
p-Isopropyltoluene	ND				1.0	ug/L			05/06/21 09:33	1	
sec-Butylbenzene	ND				1.0	ug/L			05/06/21 09:33	1	
Styrene	ND				1.0	ug/L			05/06/21 09:33	1	
tert-Butylbenzene	ND				1.0	ug/L			05/06/21 09:33	1	
Tetrachloroethene	ND				1.0	ug/L			05/06/21 09:33	1	
Toluene	ND				1.0	ug/L			05/06/21 09:33	1	
trans-1,2-Dichloroethene	ND				1.0	ug/L			05/06/21 09:33	1	
trans-1,3-Dichloropropene	ND				0.50	ug/L			05/06/21 09:33	1	
Trichloroethene	ND				1.0	ug/L			05/06/21 09:33	1	
Trichlorofluoromethane	ND				1.0	ug/L			05/06/21 09:33	1	
Vinyl chloride	ND				0.50	ug/L			05/06/21 09:33	1	
<b>MB MB</b>		<b>MB MB</b>		<b>MB MB</b>		<b>MB MB</b>		<b>MB MB</b>		<b>MB MB</b>	
Surrogate	%Recovery	Qualifier	Limits					Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	100		70 - 130						05/06/21 09:33	1	
4-Bromofluorobenzene (Surr)	101		80 - 120						05/06/21 09:33	1	
Dibromofluoromethane (Surr)	99		76 - 132						05/06/21 09:33	1	
Toluene-d8 (Surr)	103		80 - 128						05/06/21 09:33	1	

**Lab Sample ID: LCS 440-645828/1002**

**Matrix: Water**

**Analysis Batch: 645828**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSS	LCSS	Unit	D	%Rec	Limits	%Rec.
		Result	Qualifier					
1,1,1,2-Tetrachloroethane	25.0	24.5		ug/L		98	60 - 141	
1,1,1-Trichloroethane	25.0	29.1		ug/L		117	70 - 130	
1,1,2,2-Tetrachloroethane	25.0	24.9		ug/L		100	63 - 130	
1,1,2-Trichloroethane	25.0	25.1		ug/L		101	70 - 130	
1,1-Dichloroethane	25.0	27.4		ug/L		110	64 - 130	
1,1-Dichloroethene	25.0	29.7		ug/L		119	70 - 130	
1,1-Dichloropropene	25.0	29.9		ug/L		120	70 - 130	
1,2,3-Trichlorobenzene	25.0	22.5		ug/L		90	60 - 140	
1,2,3-Trichloropropane	25.0	25.2		ug/L		101	63 - 130	
1,2,4-Trichlorobenzene	25.0	22.8		ug/L		91	60 - 140	
1,2,4-Trimethylbenzene	25.0	26.3		ug/L		105	70 - 135	
1,2-Dibromo-3-Chloropropane	25.0	20.3		ug/L		81	52 - 140	
1,2-Dibromoethane (EDB)	25.0	24.8		ug/L		99	70 - 130	
1,2-Dichlorobenzene	25.0	24.4		ug/L		98	70 - 130	
1,2-Dichloroethane	25.0	24.9		ug/L		99	57 - 138	
1,2-Dichloropropane	25.0	26.1		ug/L		105	67 - 130	
1,3,5-Trimethylbenzene	25.0	27.0		ug/L		108	70 - 136	
1,3-Dichlorobenzene	25.0	25.9		ug/L		103	70 - 130	
1,3-Dichloropropane	25.0	24.8		ug/L		99	70 - 130	
1,4-Dichlorobenzene	25.0	25.2		ug/L		101	70 - 130	
2,2-Dichloropropane	25.0	29.4		ug/L		118	68 - 141	

Eurofins Calscience Irvine

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-645828/1002**

**Matrix: Water**

**Analysis Batch: 645828**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2-Chlorotoluene	25.0	25.8		ug/L		103	70 - 130
4-Chlorotoluene	25.0	26.1		ug/L		105	70 - 130
Acetone	125	117		ug/L		93	10 - 150
Benzene	25.0	27.3		ug/L		109	68 - 130
Bromobenzene	25.0	24.5		ug/L		98	70 - 130
Bromochloromethane	25.0	26.4		ug/L		106	70 - 130
Bromodichloromethane	25.0	25.8		ug/L		103	70 - 132
Bromoform	25.0	23.5		ug/L		94	60 - 148
Bromomethane	25.0	28.6		ug/L		114	64 - 139
Carbon tetrachloride	25.0	30.1		ug/L		121	60 - 150
Chlorobenzene	25.0	25.5		ug/L		102	70 - 130
Chloroethane	25.0	29.6		ug/L		118	64 - 135
Chloroform	25.0	26.8		ug/L		107	70 - 130
Chloromethane	25.0	27.0		ug/L		108	47 - 140
cis-1,2-Dichloroethene	25.0	26.6		ug/L		106	70 - 133
cis-1,3-Dichloropropene	25.0	25.5		ug/L		102	70 - 133
Dibromochloromethane	25.0	25.0		ug/L		100	69 - 145
Dibromomethane	25.0	26.3		ug/L		105	70 - 130
Dichlorodifluoromethane	25.0	26.2		ug/L		105	29 - 150
Ethylbenzene	25.0	27.4		ug/L		110	70 - 130
Hexachlorobutadiene	25.0	24.6		ug/L		98	10 - 150
Isopropylbenzene	25.0	28.1		ug/L		112	70 - 136
m,p-Xylene	25.0	27.0		ug/L		108	70 - 130
Methylene Chloride	25.0	26.4		ug/L		105	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	24.8		ug/L		99	63 - 131
Naphthalene	25.0	21.5		ug/L		86	60 - 140
n-Butylbenzene	25.0	29.3		ug/L		117	65 - 150
N-Propylbenzene	25.0	28.1		ug/L		112	67 - 139
o-Xylene	25.0	26.6		ug/L		106	70 - 130
p-Isopropyltoluene	25.0	28.1		ug/L		112	70 - 132
sec-Butylbenzene	25.0	28.3		ug/L		113	70 - 138
Styrene	25.0	25.6		ug/L		102	70 - 134
tert-Butylbenzene	25.0	27.2		ug/L		109	70 - 130
Tetrachloroethene	25.0	28.4		ug/L		114	70 - 130
Toluene	25.0	26.1		ug/L		105	70 - 130
trans-1,2-Dichloroethene	25.0	28.1		ug/L		112	70 - 130
trans-1,3-Dichloropropene	25.0	25.6		ug/L		102	70 - 132
Trichloroethene	25.0	28.6		ug/L		114	70 - 130
Trichlorofluoromethane	25.0	32.3		ug/L		129	60 - 150
Vinyl chloride	25.0	31.2		ug/L		125	59 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	102		76 - 132
Toluene-d8 (Surr)	96		80 - 128

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-645828/1003**

**Matrix: Water**

**Analysis Batch: 645828**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	271		ug/L	108		49 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	98		76 - 132
Toluene-d8 (Surr)	105		80 - 128

**Lab Sample ID: 440-282767-A-1 MS**

**Matrix: Water**

**Analysis Batch: 645828**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		10.0	9.35		ug/L	93	60 - 149	
1,1,1-Trichloroethane	ND		10.0	9.77		ug/L	98	70 - 130	
1,1,2,2-Tetrachloroethane	ND		10.0	10.0		ug/L	100	63 - 130	
1,1,2-Trichloroethane	ND		10.0	9.67		ug/L	97	70 - 130	
1,1-Dichloroethane	ND		10.0	9.47		ug/L	95	65 - 130	
1,1-Dichloroethene	ND		10.0	10.3		ug/L	103	70 - 130	
1,1-Dichloropropene	ND		10.0	10.5		ug/L	105	64 - 130	
1,2,3-Trichlorobenzene	ND		10.0	8.92		ug/L	89	60 - 140	
1,2,3-Trichloropropane	ND		10.0	10.1		ug/L	101	60 - 130	
1,2,4-Trichlorobenzene	ND		10.0	9.14		ug/L	91	60 - 140	
1,2,4-Trimethylbenzene	ND		10.0	9.87		ug/L	99	70 - 130	
1,2-Dibromo-3-Chloropropane	ND		10.0	8.08		ug/L	81	48 - 140	
1,2-Dibromoethane (EDB)	ND		10.0	9.49		ug/L	95	70 - 131	
1,2-Dichlorobenzene	ND		10.0	9.54		ug/L	95	70 - 130	
1,2-Dichloroethane	ND		10.0	9.00		ug/L	90	56 - 146	
1,2-Dichloropropane	ND		10.0	9.59		ug/L	96	69 - 130	
1,3,5-Trimethylbenzene	ND		10.0	9.71		ug/L	97	70 - 130	
1,3-Dichlorobenzene	ND		10.0	9.52		ug/L	95	70 - 130	
1,3-Dichloropropane	ND		10.0	9.66		ug/L	97	70 - 130	
1,4-Dichlorobenzene	ND		10.0	9.63		ug/L	96	70 - 130	
2,2-Dichloropropane	ND		10.0	10.3		ug/L	103	69 - 138	
2-Chlorotoluene	ND		10.0	9.47		ug/L	95	70 - 130	
4-Chlorotoluene	ND		10.0	9.35		ug/L	94	70 - 130	
Acetone	ND		50.0	45.3		ug/L	91	10 - 150	
Benzene	ND		10.0	9.60		ug/L	96	66 - 130	
Bromobenzene	ND		10.0	9.10		ug/L	91	70 - 130	
Bromochloromethane	ND		10.0	9.41		ug/L	94	70 - 130	
Bromodichloromethane	ND		10.0	9.44		ug/L	94	70 - 138	
Bromoform	ND		10.0	8.69		ug/L	87	59 - 150	
Bromomethane	ND		10.0	9.97		ug/L	100	62 - 131	
Carbon tetrachloride	ND		10.0	10.1		ug/L	101	60 - 150	
Chlorobenzene	ND		10.0	9.60		ug/L	96	70 - 130	
Chloroethane	ND		10.0	10.0		ug/L	100	68 - 130	
Chloroform	ND		10.0	9.80		ug/L	98	70 - 130	
Chloromethane	ND		10.0	9.25		ug/L	93	39 - 144	

Eurofins Calscience Irvine

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-282767-A-1 MS**

**Matrix: Water**

**Analysis Batch: 645828**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
cis-1,2-Dichloroethene	ND		10.0	9.70		ug/L	97	70 - 130	
cis-1,3-Dichloropropene	ND		10.0	9.49		ug/L	95	70 - 133	
Dibromochloromethane	ND		10.0	9.36		ug/L	94	70 - 148	
Dibromomethane	ND		10.0	9.42		ug/L	94	70 - 130	
Dichlorodifluoromethane	ND		10.0	8.70		ug/L	87	25 - 142	
Ethylbenzene	ND		10.0	9.96		ug/L	100	70 - 130	
Hexachlorobutadiene	ND		10.0	9.74		ug/L	97	10 - 150	
Isopropyl alcohol	ND		250	ND		ug/L	95	46 - 142	
Isopropylbenzene	ND		10.0	10.0		ug/L	100	70 - 132	
m,p-Xylene	ND		10.0	9.73		ug/L	97	70 - 133	
Methylene Chloride	ND		10.0	9.18		ug/L	92	52 - 130	
Methyl-t-Butyl Ether (MTBE)	ND		10.0	8.70		ug/L	87	70 - 130	
Naphthalene	ND		10.0	8.52		ug/L	85	60 - 140	
n-Butylbenzene	ND		10.0	11.0		ug/L	110	61 - 149	
N-Propylbenzene	ND		10.0	10.0		ug/L	100	66 - 135	
o-Xylene	ND		10.0	9.56		ug/L	96	70 - 133	
p-Isopropyltoluene	ND		10.0	10.3		ug/L	103	70 - 130	
sec-Butylbenzene	ND		10.0	10.1		ug/L	101	67 - 134	
Styrene	ND		10.0	9.22		ug/L	92	29 - 150	
tert-Butylbenzene	ND		10.0	9.82		ug/L	98	70 - 130	
Tetrachloroethene	ND		10.0	11.0		ug/L	104	70 - 137	
Toluene	ND		10.0	9.80		ug/L	98	70 - 130	
trans-1,2-Dichloroethene	ND		10.0	9.68		ug/L	97	70 - 130	
trans-1,3-Dichloropropene	ND		10.0	9.84		ug/L	98	70 - 138	
Trichloroethene	ND		10.0	10.0		ug/L	100	70 - 130	
Trichlorofluoromethane	ND		10.0	10.8		ug/L	108	60 - 150	
Vinyl chloride	ND		10.0	10.6		ug/L	106	50 - 137	

Surrogate	MS	MS	Limits
	Surrogate	%Recovery	Qualifier
1,2-Dichloroethane-d4 (Surr)	96		70 - 130
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132
Toluene-d8 (Surr)	102		80 - 128

**Lab Sample ID: 440-282767-A-1 MSD**

**Matrix: Water**

**Analysis Batch: 645828**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	ND		10.0	10.0		ug/L	100	60 - 149		7	20
1,1,1-Trichloroethane	ND		10.0	10.9		ug/L	109	70 - 130		11	20
1,1,2,2-Tetrachloroethane	ND		10.0	10.9		ug/L	109	63 - 130		8	30
1,1,2-Trichloroethane	ND		10.0	10.0		ug/L	100	70 - 130		4	25
1,1-Dichloroethane	ND		10.0	10.3		ug/L	103	65 - 130		8	20
1,1-Dichloroethene	ND		10.0	10.9		ug/L	109	70 - 130		6	20
1,1-Dichloropropene	ND		10.0	11.3		ug/L	113	64 - 130		7	20
1,2,3-Trichlorobenzene	ND		10.0	9.92		ug/L	99	60 - 140		11	20
1,2,3-Trichloropropane	ND		10.0	11.0		ug/L	110	60 - 130		9	30

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-282767-A-1 MSD**

**Matrix: Water**

**Analysis Batch: 645828**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	ND		10.0	9.72		ug/L	97	60 - 140	6	20	
1,2,4-Trimethylbenzene	ND		10.0	10.6		ug/L	106	70 - 130	7	25	
1,2-Dibromo-3-Chloropropane	ND		10.0	9.05		ug/L	90	48 - 140	11	30	
1,2-Dibromoethane (EDB)	ND		10.0	10.2		ug/L	102	70 - 131	7	25	
1,2-Dichlorobenzene	ND		10.0	9.96		ug/L	100	70 - 130	4	20	
1,2-Dichloroethane	ND		10.0	9.76		ug/L	98	56 - 146	8	20	
1,2-Dichloropropane	ND		10.0	10.3		ug/L	103	69 - 130	7	20	
1,3,5-Trimethylbenzene	ND		10.0	10.6		ug/L	106	70 - 130	9	20	
1,3-Dichlorobenzene	ND		10.0	10.2		ug/L	102	70 - 130	7	20	
1,3-Dichloropropane	ND		10.0	9.97		ug/L	100	70 - 130	3	25	
1,4-Dichlorobenzene	ND		10.0	10.2		ug/L	102	70 - 130	5	20	
2,2-Dichloropropane	ND		10.0	11.2		ug/L	112	69 - 138	8	25	
2-Chlorotoluene	ND		10.0	10.1		ug/L	101	70 - 130	7	20	
4-Chlorotoluene	ND		10.0	10.0		ug/L	100	70 - 130	7	20	
Acetone	ND		50.0	49.8		ug/L	100	10 - 150	9	35	
Benzene	ND		10.0	10.5		ug/L	105	66 - 130	9	20	
Bromobenzene	ND		10.0	9.83		ug/L	98	70 - 130	8	20	
Bromochloromethane	ND		10.0	10.3		ug/L	103	70 - 130	9	25	
Bromodichloromethane	ND		10.0	10.2		ug/L	102	70 - 138	7	20	
Bromoform	ND		10.0	9.68		ug/L	97	59 - 150	11	25	
Bromomethane	ND		10.0	10.7		ug/L	107	62 - 131	7	25	
Carbon tetrachloride	ND		10.0	10.9		ug/L	109	60 - 150	8	25	
Chlorobenzene	ND		10.0	10.2		ug/L	102	70 - 130	6	20	
Chloroethane	ND		10.0	11.2		ug/L	112	68 - 130	11	25	
Chloroform	ND		10.0	10.5		ug/L	105	70 - 130	7	20	
Chloromethane	ND		10.0	10.0		ug/L	100	39 - 144	8	25	
cis-1,2-Dichloroethene	ND		10.0	10.2		ug/L	102	70 - 130	5	20	
cis-1,3-Dichloropropene	ND		10.0	9.90		ug/L	99	70 - 133	4	20	
Dibromochloromethane	ND		10.0	10.1		ug/L	101	70 - 148	8	25	
Dibromomethane	ND		10.0	10.5		ug/L	105	70 - 130	10	25	
Dichlorodifluoromethane	ND		10.0	9.72		ug/L	97	25 - 142	11	30	
Ethylbenzene	ND		10.0	10.6		ug/L	106	70 - 130	6	20	
Hexachlorobutadiene	ND		10.0	10.5		ug/L	105	10 - 150	7	20	
Isopropyl alcohol	ND		250	285		ug/L	114	46 - 142	18	40	
Isopropylbenzene	ND		10.0	10.5		ug/L	105	70 - 132	5	20	
m,p-Xylene	ND		10.0	10.3		ug/L	103	70 - 133	6	25	
Methylene Chloride	ND		10.0	10.0		ug/L	100	52 - 130	9	20	
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.65		ug/L	97	70 - 130	10	25	
Naphthalene	ND		10.0	9.46		ug/L	95	60 - 140	10	30	
n-Butylbenzene	ND		10.0	11.6		ug/L	116	61 - 149	5	20	
N-Propylbenzene	ND		10.0	10.7		ug/L	107	66 - 135	6	20	
o-Xylene	ND		10.0	10.2		ug/L	102	70 - 133	6	20	
p-Isopropyltoluene	ND		10.0	10.9		ug/L	109	70 - 130	6	20	
sec-Butylbenzene	ND		10.0	10.8		ug/L	108	67 - 134	6	20	
Styrene	ND		10.0	9.81		ug/L	98	29 - 150	6	35	
tert-Butylbenzene	ND		10.0	10.5		ug/L	105	70 - 130	6	20	
Tetrachloroethene	ND		10.0	11.6		ug/L	109	70 - 137	4	20	
Toluene	ND		10.0	10.1		ug/L	101	70 - 130	3	20	
trans-1,2-Dichloroethene	ND		10.0	10.3		ug/L	103	70 - 130	6	20	

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-282767-A-1 MSD**

**Matrix: Water**

**Analysis Batch: 645828**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD
trans-1,3-Dichloropropene	ND		10.0	10.2	ug/L	102	70 - 138	3	25
Surrogate	%Recovery	MSD Qualifier	MSD Limits						
1,2-Dichloroethane-d4 (Surr)	101		70 - 130						
4-Bromofluorobenzene (Surr)	99		80 - 120						
Dibromofluoromethane (Surr)	102		76 - 132						
Toluene-d8 (Surr)	99		80 - 128						

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID: MB 440-645498/1-A**

**Matrix: Water**

**Analysis Batch: 645763**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 645498**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
1,4-Dioxane	ND		0.50	ug/L	05/03/21 14:26	05/05/21 19:24		1	
Surrogate	%Recovery	MB Qualifier	MB Limits						
1,4-Dioxane-d8 (Surr)	47		27 - 120						

**Lab Sample ID: LCS 440-645498/3-A**

**Matrix: Water**

**Analysis Batch: 645763**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 645498**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	
1,4-Dioxane	2.00	0.951	ug/L	48	36 - 120		
Surrogate	%Recovery	LCS Qualifier	LCS Limits				
1,4-Dioxane-d8 (Surr)	50		27 - 120				

**Lab Sample ID: LCSD 440-645498/4-A**

**Matrix: Water**

**Analysis Batch: 645763**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 645498**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD
1,4-Dioxane	2.00	0.929	ug/L	46	36 - 120		2
Surrogate	%Recovery	LCSD Qualifier	LCSD Limits				
1,4-Dioxane-d8 (Surr)	48		27 - 120				

# QC Association Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
SDG: Omega Chemical

## GC/MS VOA

### Analysis Batch: 645828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282663-1	OC_SP220B_EFF_050321	Total/NA	Water	8260B	
440-282663-2	OC_SP210_INF_050321	Total/NA	Water	8260B	
440-282663-2 - DL	OC_SP210_INF_050321	Total/NA	Water	8260B	
MB 440-645828/4	Method Blank	Total/NA	Water	8260B	
LCS 440-645828/1002	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-645828/1003	Lab Control Sample	Total/NA	Water	8260B	
440-282767-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-282767-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 645498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282663-1	OC_SP220B_EFF_050321	Total/NA	Water	3520C	
MB 440-645498/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-645498/3-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-645498/4-A	Lab Control Sample Dup	Total/NA	Water	3520C	

### Analysis Batch: 645763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282663-1	OC_SP220B_EFF_050321	Total/NA	Water	8270C SIM	645498
MB 440-645498/1-A	Method Blank	Total/NA	Water	8270C SIM	645498
LCS 440-645498/3-A	Lab Control Sample	Total/NA	Water	8270C SIM	645498
LCSD 440-645498/4-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	645498

# Definitions/Glossary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
SDG: Omega Chemical

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-282663-1  
SDG: Omega Chemical

## Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	1,1-Dichloropropene
8260B		Water	1,2,3-Trichlorobenzene
8260B		Water	1,2,4-Trimethylbenzene
8260B		Water	1,3,5-Trimethylbenzene
8260B		Water	1,3-Dichloropropane
8260B		Water	2,2-Dichloropropane
8260B		Water	2-Chlorotoluene
8260B		Water	Acetone
8260B		Water	Isopropyl alcohol
8260B		Water	Isopropylbenzene
8260B		Water	m,p-Xylene
8260B		Water	p-Isopropyltoluene
8270C SIM	3520C	Water	1,4-Dioxane



## Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C. Job Number: 440-282663-1  
SDG Number: Omega Chemical

**Login Number:** 282663

**List Source:** Eurofins Irvine

**List Number:** 1

**Creator:** Skinner, Alma D

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True		
The cooler's custody seal, if present, is intact.	N/A	Not present	
Sample custody seals, if present, are intact.	N/A	Not Present	
The cooler or samples do not appear to have been compromised or tampered with.	True		
Samples were received on ice.	True		
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.	
Cooler Temperature is recorded.	True		
COC is present.	True		
COC is filled out in ink and legible.	True		
COC is filled out with all pertinent information.	True		
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.	
There are no discrepancies between the containers received and the COC.	True		
Samples are received within Holding Time (excluding tests with immediate HTs)	True		
Sample containers have legible labels.	True		
Containers are not broken or leaking.	True		
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	N/A		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		
Residual Chlorine Checked.	N/A		



Environment Testing  
America



## ANALYTICAL REPORT

Eurofins Calscience Irvine  
17461 Derian Ave  
Suite 100  
Irvine, CA 92614-5817  
Tel: (949)261-1022

Laboratory Job ID: 440-284202-1

Laboratory Sample Delivery Group: Omega Chemical  
Client Project/Site: Omega Chemical GWCS Monthly

For:

Jacob & Hefner Associates P.C.  
15375 Barranca Parkway, J-101  
Irvine, California 92618

Attn: Trent Henderson

Danielle Roberts

Authorized for release by:  
6/14/2021 2:27:00 PM

Danielle Roberts, Senior Project Manager  
(949)260-3249  
[Danielle.Roberts@Eurofinset.com](mailto:Danielle.Roberts@Eurofinset.com)

### LINKS

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The  
Expert

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Sample Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-284202-1	OC_SP220B_EFF_060221	Water	06/02/21 12:00	06/04/21 15:45	
440-284202-2	OC_SP210_INF_060221	Water	06/02/21 12:05	06/04/21 15:45	
440-284202-3	OC_TB_060221	Water	06/02/21 11:55	06/04/21 15:45	

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# Case Narrative

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
SDG: Omega Chemical

## Job ID: 440-284202-1

### Laboratory: Eurofins Calscience Irvine

#### Narrative

#### Job Narrative 440-284202-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 6/4/2021 3:45 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.2° C.

#### GC/MS VOA

Method 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-155395. A laboratory LCS/LCSD was analyzed to provide precision data.

Method 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-155998. A laboratory LCS/LCSD was analyzed to provide precision data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

## Detection Summary

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

**Client Sample ID: OC\_SP220B\_EFF\_060221**

**Lab Sample ID: 440-284202-1**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	22		0.10	ug/L	1		8270C SIM ID	Total/NA

**Client Sample ID: OC\_SP210\_INF\_060221**

**Lab Sample ID: 440-284202-2**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	1.7		0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	15		0.50	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	0.90		0.50	ug/L	1		8260B	Total/NA
Chloroform	8.0		0.50	ug/L	1		8260B	Total/NA
Total Volatile Organic Compounds	430		150	ug/L	1		8260B	Total/NA
Trichloroethene	24		0.50	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	9.1		0.50	ug/L	1		8260B	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane - DL	120		2.5	ug/L	5		8260B	Total/NA
Tetrachloroethene - DL	160		2.5	ug/L	5		8260B	Total/NA

**Client Sample ID: OC\_TB\_060221**

**Lab Sample ID: 440-284202-3**

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

**Client Sample ID: OC\_SP220B\_EFF\_060221**

**Lab Sample ID: 440-284202-1**

**Matrix: Water**

Date Collected: 06/02/21 12:00

Date Received: 06/04/21 15:45

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L		06/07/21 18:58		1
1,1,1-Trichloroethane	ND		0.50	ug/L		06/07/21 18:58		1
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L		06/07/21 18:58		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	ug/L		06/07/21 18:58		1
1,1,2-Trichloroethane	ND		0.50	ug/L		06/07/21 18:58		1
1,1-Dichloroethane	ND		0.50	ug/L		06/07/21 18:58		1
1,1-Dichloroethene	ND		0.50	ug/L		06/07/21 18:58		1
1,1-Dichloropropene	ND		0.50	ug/L		06/07/21 18:58		1
1,2,3-Trichlorobenzene	ND		0.50	ug/L		06/07/21 18:58		1
1,2,3-Trichloropropane	ND		0.50	ug/L		06/07/21 18:58		1
1,2,4-Trichlorobenzene	ND		0.50	ug/L		06/07/21 18:58		1
1,2,4-Trimethylbenzene	ND		0.50	ug/L		06/07/21 18:58		1
1,2-Dibromo-3-Chloropropane	ND		1.0	ug/L		06/07/21 18:58		1
1,2-Dibromoethane	ND		0.50	ug/L		06/07/21 18:58		1
1,2-Dichlorobenzene	ND		0.50	ug/L		06/07/21 18:58		1
1,2-Dichloroethane	ND		0.50	ug/L		06/07/21 18:58		1
1,2-Dichloropropane	ND		0.50	ug/L		06/07/21 18:58		1
1,3,5-Trimethylbenzene	ND		0.50	ug/L		06/07/21 18:58		1
1,3-Dichlorobenzene	ND		0.50	ug/L		06/07/21 18:58		1
1,3-Dichloropropane	ND		0.50	ug/L		06/07/21 18:58		1
1,4-Dichlorobenzene	ND		0.50	ug/L		06/07/21 18:58		1
2,2-Dichloropropane	ND		0.50	ug/L		06/07/21 18:58		1
2-Butanone	ND		5.0	ug/L		06/07/21 18:58		1
2-Chlorotoluene	ND		0.50	ug/L		06/07/21 18:58		1
2-Hexanone	ND		6.0	ug/L		06/07/21 18:58		1
4-Chlorotoluene	ND		0.50	ug/L		06/07/21 18:58		1
Acetone	ND		8.0	ug/L		06/07/21 18:58		1
Benzene	ND		0.50	ug/L		06/07/21 18:58		1
Bromobenzene	ND		0.50	ug/L		06/07/21 18:58		1
Bromochloromethane	ND		1.0	ug/L		06/07/21 18:58		1
Bromodichloromethane	ND		0.50	ug/L		06/07/21 18:58		1
Bromoform	ND		0.50	ug/L		06/07/21 18:58		1
Bromomethane	ND		1.0	ug/L		06/07/21 18:58		1
Carbon tetrachloride	ND		0.50	ug/L		06/07/21 18:58		1
Chlorobenzene	ND		0.50	ug/L		06/07/21 18:58		1
Chloroethane	ND		0.50	ug/L		06/07/21 18:58		1
Chloroform	ND		0.50	ug/L		06/07/21 18:58		1
Chloromethane	ND		1.0	ug/L		06/07/21 18:58		1
cis-1,2-Dichloroethene	ND		0.50	ug/L		06/07/21 18:58		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		06/07/21 18:58		1
Dibromochloromethane	ND		0.50	ug/L		06/07/21 18:58		1
Dibromomethane	ND		0.50	ug/L		06/07/21 18:58		1
Dichlorodifluoromethane	ND		1.0	ug/L		06/07/21 18:58		1
Ethylbenzene	ND		0.50	ug/L		06/07/21 18:58		1
Hexachloro-1,3-butadiene	ND		1.0	ug/L		06/07/21 18:58		1
Isopropanol	ND		40	ug/L		06/07/21 18:58		1
Isopropylbenzene	ND		0.50	ug/L		06/07/21 18:58		1
m,p-Xylene	ND		1.0	ug/L		06/07/21 18:58		1
Methylene Chloride	ND		1.0	ug/L		06/07/21 18:58		1

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# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

**Client Sample ID: OC\_SP220B\_EFF\_060221**

**Lab Sample ID: 440-284202-1**

Matrix: Water

Date Collected: 06/02/21 12:00

Date Received: 06/04/21 15:45

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	ug/L		06/07/21 18:58		1
n-Butylbenzene	ND		0.50	ug/L		06/07/21 18:58		1
N-Propylbenzene	ND		0.50	ug/L		06/07/21 18:58		1
o-Xylene	ND		0.50	ug/L		06/07/21 18:58		1
p-Isopropyltoluene	ND		0.50	ug/L		06/07/21 18:58		1
sec-Butylbenzene	ND		0.50	ug/L		06/07/21 18:58		1
Styrene	ND		0.50	ug/L		06/07/21 18:58		1
tert-Butylbenzene	ND		0.50	ug/L		06/07/21 18:58		1
Tetrachloroethene	ND		0.50	ug/L		06/07/21 18:58		1
Toluene	ND		0.50	ug/L		06/07/21 18:58		1
Total Volatile Organic Compounds	ND		150	ug/L		06/07/21 18:58		1
trans-1,2-Dichloroethene	ND		0.50	ug/L		06/07/21 18:58		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		06/07/21 18:58		1
Trichloroethene	ND		0.50	ug/L		06/07/21 18:58		1
Trichlorofluoromethane	ND		0.50	ug/L		06/07/21 18:58		1
Vinyl acetate	ND		5.0	ug/L		06/07/21 18:58		1
Vinyl chloride	ND		0.50	ug/L		06/07/21 18:58		1
<b>Surrogate</b>				<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>
1,2-Dichloroethane-d4 (Surr)	98			68 - 135			06/07/21 18:58	1
4-Bromofluorobenzene (Surr)	94			71 - 120			06/07/21 18:58	1
Dibromofluoromethane (Surr)	104			80 - 120			06/07/21 18:58	1
Toluene-d8 (Surr)	100			80 - 120			06/07/21 18:58	1

## Method: 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	22		0.10	ug/L		06/08/21 07:19	06/09/21 20:20	1
<b>Isotope Dilution</b>				<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>
1,4-Dioxane-d8	28			15 - 150			06/08/21 07:19	06/09/21 20:20
<b>Surrogate</b>				<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>
Nitrobenzene-d5 (Surr)	101			46 - 128			06/08/21 07:19	06/09/21 20:20

**Client Sample ID: OC\_SP210\_INF\_060221**

**Lab Sample ID: 440-284202-2**

Matrix: Water

Date Collected: 06/02/21 12:05

Date Received: 06/04/21 15:45

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L		06/09/21 14:56		1
<b>1,1,1-Trichloroethane</b>	<b>1.7</b>		0.50	ug/L		06/09/21 14:56		1
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L		06/09/21 14:56		1
1,1,2-Trichloroethane	ND		0.50	ug/L		06/09/21 14:56		1
1,1-Dichloroethane	ND		0.50	ug/L		06/09/21 14:56		1
<b>1,1-Dichloroethene</b>	<b>15</b>		0.50	ug/L		06/09/21 14:56		1
1,1-Dichloropropene	ND		0.50	ug/L		06/09/21 14:56		1
1,2,3-Trichlorobenzene	ND		0.50	ug/L		06/09/21 14:56		1
1,2,3-Trichloropropane	ND		0.50	ug/L		06/09/21 14:56		1
1,2,4-Trichlorobenzene	ND		0.50	ug/L		06/09/21 14:56		1
1,2,4-Trimethylbenzene	ND		0.50	ug/L		06/09/21 14:56		1

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# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

**Client Sample ID: OC\_SP210\_INF\_060221**

**Lab Sample ID: 440-284202-2**

**Matrix: Water**

Date Collected: 06/02/21 12:05

Date Received: 06/04/21 15:45

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		1.0	ug/L		06/09/21 14:56		1
1,2-Dibromoethane	ND		0.50	ug/L		06/09/21 14:56		1
1,2-Dichlorobenzene	ND		0.50	ug/L		06/09/21 14:56		1
<b>1,2-Dichloroethane</b>	<b>0.90</b>		0.50	ug/L		06/09/21 14:56		1
1,2-Dichloropropane	ND		0.50	ug/L		06/09/21 14:56		1
1,3,5-Trimethylbenzene	ND		0.50	ug/L		06/09/21 14:56		1
1,3-Dichlorobenzene	ND		0.50	ug/L		06/09/21 14:56		1
1,3-Dichloropropane	ND		0.50	ug/L		06/09/21 14:56		1
1,4-Dichlorobenzene	ND		0.50	ug/L		06/09/21 14:56		1
2,2-Dichloropropane	ND		0.50	ug/L		06/09/21 14:56		1
2-Butanone	ND		5.0	ug/L		06/09/21 14:56		1
2-Chlorotoluene	ND		0.50	ug/L		06/09/21 14:56		1
2-Hexanone	ND		6.0	ug/L		06/09/21 14:56		1
4-Chlorotoluene	ND		0.50	ug/L		06/09/21 14:56		1
Acetone	ND		8.0	ug/L		06/09/21 14:56		1
Benzene	ND		0.50	ug/L		06/09/21 14:56		1
Bromobenzene	ND		0.50	ug/L		06/09/21 14:56		1
Bromochloromethane	ND		1.0	ug/L		06/09/21 14:56		1
Bromodichloromethane	ND		0.50	ug/L		06/09/21 14:56		1
Bromoform	ND		0.50	ug/L		06/09/21 14:56		1
Bromomethane	ND		1.0	ug/L		06/09/21 14:56		1
Carbon tetrachloride	ND		0.50	ug/L		06/09/21 14:56		1
Chlorobenzene	ND		0.50	ug/L		06/09/21 14:56		1
Chloroethane	ND		0.50	ug/L		06/09/21 14:56		1
<b>Chloroform</b>	<b>8.0</b>		0.50	ug/L		06/09/21 14:56		1
Chloromethane	ND		1.0	ug/L		06/09/21 14:56		1
cis-1,2-Dichloroethene	ND		0.50	ug/L		06/09/21 14:56		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		06/09/21 14:56		1
Dibromochloromethane	ND		0.50	ug/L		06/09/21 14:56		1
Dibromomethane	ND		0.50	ug/L		06/09/21 14:56		1
Dichlorodifluoromethane	ND		1.0	ug/L		06/09/21 14:56		1
Ethylbenzene	ND		0.50	ug/L		06/09/21 14:56		1
Hexachloro-1,3-butadiene	ND		1.0	ug/L		06/09/21 14:56		1
Isopropanol	ND		40	ug/L		06/09/21 14:56		1
Isopropylbenzene	ND		0.50	ug/L		06/09/21 14:56		1
m,p-Xylene	ND		1.0	ug/L		06/09/21 14:56		1
Methylene Chloride	ND		1.0	ug/L		06/09/21 14:56		1
Naphthalene	ND		1.0	ug/L		06/09/21 14:56		1
n-Butylbenzene	ND		0.50	ug/L		06/09/21 14:56		1
N-Propylbenzene	ND		0.50	ug/L		06/09/21 14:56		1
o-Xylene	ND		0.50	ug/L		06/09/21 14:56		1
p-Isopropyltoluene	ND		0.50	ug/L		06/09/21 14:56		1
sec-Butylbenzene	ND		0.50	ug/L		06/09/21 14:56		1
Styrene	ND		0.50	ug/L		06/09/21 14:56		1
tert-Butylbenzene	ND		0.50	ug/L		06/09/21 14:56		1
Toluene	ND		0.50	ug/L		06/09/21 14:56		1
<b>Total Volatile Organic Compounds</b>	<b>430</b>		150	ug/L		06/09/21 14:56		1
trans-1,2-Dichloroethene	ND		0.50	ug/L		06/09/21 14:56		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		06/09/21 14:56		1

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# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

**Client Sample ID: OC\_SP210\_INF\_060221**

**Lab Sample ID: 440-284202-2**

Matrix: Water

Date Collected: 06/02/21 12:05

Date Received: 06/04/21 15:45

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	24		0.50	ug/L			06/09/21 14:56	1
Trichlorofluoromethane	9.1		0.50	ug/L			06/09/21 14:56	1
Vinyl acetate	ND		5.0	ug/L			06/09/21 14:56	1
Vinyl chloride	ND		0.50	ug/L			06/09/21 14:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		68 - 135		06/09/21 14:56	1
4-Bromofluorobenzene (Surr)	90		71 - 120		06/09/21 14:56	1
Dibromofluoromethane (Surr)	97		80 - 120		06/09/21 14:56	1
Toluene-d8 (Surr)	98		80 - 120		06/09/21 14:56	1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	120		2.5	ug/L			06/07/21 20:57	5
Tetrachloroethene	160		2.5	ug/L			06/07/21 20:57	5
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1,2-Dichloroethane-d4 (Surr)	100		68 - 135		06/07/21 20:57	5		
4-Bromofluorobenzene (Surr)	100		71 - 120		06/07/21 20:57	5		
Dibromofluoromethane (Surr)	100		80 - 120		06/07/21 20:57	5		
Toluene-d8 (Surr)	98		80 - 120		06/07/21 20:57	5		

**Client Sample ID: OC\_TB\_060221**

**Lab Sample ID: 440-284202-3**

Matrix: Water

Date Collected: 06/02/21 11:55

Date Received: 06/04/21 15:45

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L			06/07/21 13:31	1
1,1,1-Trichloroethane	ND		0.50	ug/L			06/07/21 13:31	1
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L			06/07/21 13:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	ug/L			06/07/21 13:31	1
1,1,2-Trichloroethane	ND		0.50	ug/L			06/07/21 13:31	1
1,1-Dichloroethane	ND		0.50	ug/L			06/07/21 13:31	1
1,1-Dichloroethene	ND		0.50	ug/L			06/07/21 13:31	1
1,1-Dichloropropene	ND		0.50	ug/L			06/07/21 13:31	1
1,2,3-Trichlorobenzene	ND		0.50	ug/L			06/07/21 13:31	1
1,2,3-Trichloropropane	ND		0.50	ug/L			06/07/21 13:31	1
1,2,4-Trichlorobenzene	ND		0.50	ug/L			06/07/21 13:31	1
1,2,4-Trimethylbenzene	ND		0.50	ug/L			06/07/21 13:31	1
1,2-Dibromo-3-Chloropropane	ND		1.0	ug/L			06/07/21 13:31	1
1,2-Dibromoethane	ND		0.50	ug/L			06/07/21 13:31	1
1,2-Dichlorobenzene	ND		0.50	ug/L			06/07/21 13:31	1
1,2-Dichloroethane	ND		0.50	ug/L			06/07/21 13:31	1
1,2-Dichloropropane	ND		0.50	ug/L			06/07/21 13:31	1
1,3,5-Trimethylbenzene	ND		0.50	ug/L			06/07/21 13:31	1
1,3-Dichlorobenzene	ND		0.50	ug/L			06/07/21 13:31	1
1,3-Dichloropropane	ND		0.50	ug/L			06/07/21 13:31	1
1,4-Dichlorobenzene	ND		0.50	ug/L			06/07/21 13:31	1
2,2-Dichloropropane	ND		0.50	ug/L			06/07/21 13:31	1

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# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

**Client Sample ID: OC\_TB\_060221**

**Lab Sample ID: 440-284202-3**

**Matrix: Water**

Date Collected: 06/02/21 11:55

Date Received: 06/04/21 15:45

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		5.0	ug/L		06/07/21 13:31		1
2-Chlorotoluene	ND		0.50	ug/L		06/07/21 13:31		1
2-Hexanone	ND		6.0	ug/L		06/07/21 13:31		1
4-Chlorotoluene	ND		0.50	ug/L		06/07/21 13:31		1
Acetone	ND		8.0	ug/L		06/07/21 13:31		1
Benzene	ND		0.50	ug/L		06/07/21 13:31		1
Bromobenzene	ND		0.50	ug/L		06/07/21 13:31		1
Bromochloromethane	ND		1.0	ug/L		06/07/21 13:31		1
Bromodichloromethane	ND		0.50	ug/L		06/07/21 13:31		1
Bromoform	ND		0.50	ug/L		06/07/21 13:31		1
Bromomethane	ND		1.0	ug/L		06/07/21 13:31		1
Carbon tetrachloride	ND		0.50	ug/L		06/07/21 13:31		1
Chlorobenzene	ND		0.50	ug/L		06/07/21 13:31		1
Chloroethane	ND		0.50	ug/L		06/07/21 13:31		1
Chloroform	ND		0.50	ug/L		06/07/21 13:31		1
Chloromethane	ND		1.0	ug/L		06/07/21 13:31		1
cis-1,2-Dichloroethene	ND		0.50	ug/L		06/07/21 13:31		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		06/07/21 13:31		1
Dibromochloromethane	ND		0.50	ug/L		06/07/21 13:31		1
Dibromomethane	ND		0.50	ug/L		06/07/21 13:31		1
Dichlorodifluoromethane	ND		1.0	ug/L		06/07/21 13:31		1
Ethylbenzene	ND		0.50	ug/L		06/07/21 13:31		1
Hexachloro-1,3-butadiene	ND		1.0	ug/L		06/07/21 13:31		1
Isopropanol	ND		40	ug/L		06/07/21 13:31		1
Isopropylbenzene	ND		0.50	ug/L		06/07/21 13:31		1
m,p-Xylene	ND		1.0	ug/L		06/07/21 13:31		1
Methylene Chloride	ND		1.0	ug/L		06/07/21 13:31		1
Naphthalene	ND		1.0	ug/L		06/07/21 13:31		1
n-Butylbenzene	ND		0.50	ug/L		06/07/21 13:31		1
N-Propylbenzene	ND		0.50	ug/L		06/07/21 13:31		1
o-Xylene	ND		0.50	ug/L		06/07/21 13:31		1
p-Isopropyltoluene	ND		0.50	ug/L		06/07/21 13:31		1
sec-Butylbenzene	ND		0.50	ug/L		06/07/21 13:31		1
Styrene	ND		0.50	ug/L		06/07/21 13:31		1
tert-Butylbenzene	ND		0.50	ug/L		06/07/21 13:31		1
Tetrachloroethene	ND		0.50	ug/L		06/07/21 13:31		1
Toluene	ND		0.50	ug/L		06/07/21 13:31		1
Total Volatile Organic Compounds	ND		150	ug/L		06/07/21 13:31		1
trans-1,2-Dichloroethene	ND		0.50	ug/L		06/07/21 13:31		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		06/07/21 13:31		1
Trichloroethene	ND		0.50	ug/L		06/07/21 13:31		1
Trichlorofluoromethane	ND		0.50	ug/L		06/07/21 13:31		1
Vinyl acetate	ND		5.0	ug/L		06/07/21 13:31		1
Vinyl chloride	ND		0.50	ug/L		06/07/21 13:31		1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>		<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>	
1,2-Dichloroethane-d4 (Surr)	97		68 - 135			06/07/21 13:31		1
4-Bromofluorobenzene (Surr)	96		71 - 120			06/07/21 13:31		1
Dibromofluoromethane (Surr)	103		80 - 120			06/07/21 13:31		1
Toluene-d8 (Surr)	103		80 - 120			06/07/21 13:31		1

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# Surrogate Summary

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (68-135)	BFB (71-120)	DBFM (80-120)	TOL (80-120)
440-284202-1	OC_SP220B_EFF_060221	98	94	104	100
440-284202-2 - DL	OC_SP210_INF_060221	100	100	100	98
440-284202-2	OC_SP210_INF_060221	90	90	97	98
440-284202-3	OC_TB_060221	97	96	103	103
LCS 570-155395/4	Lab Control Sample	97	100	99	102
LCS 570-155998/4	Lab Control Sample	100	98	103	100
LCSD 570-155395/5	Lab Control Sample Dup	102	103	103	99
LCSD 570-155998/5	Lab Control Sample Dup	100	103	101	96
MB 570-155395/8	Method Blank	101	98	104	100
MB 570-155998/8	Method Blank	89	100	101	100

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

## Method: 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		NBZ (46-128)			
440-284202-1	OC_SP220B_EFF_060221	101			
440-284202-1 MS	OC_SP220B_EFF_060221	97			
440-284202-1 MSD	OC_SP220B_EFF_060221	100			
LCS 570-155680/2-A	Lab Control Sample	86			
LCSD 570-155680/3-A	Lab Control Sample Dup	101			
MB 570-155680/1-A	Method Blank	90			

### Surrogate Legend

NBZ = Nitrobenzene-d5 (Surr)

## Method Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	ECL 2
8270C SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	ECL 1
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ECL 1
5030C	Purge and Trap	SW846	ECL 2

### Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

ECL 2 = Eurofins Calscience LLC Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

# Lab Chronicle

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

**Client Sample ID: OC\_SP220B\_EFF\_060221**

**Lab Sample ID: 440-284202-1**

Matrix: Water

Date Collected: 06/02/21 12:00

Date Received: 06/04/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	155395	06/07/21 18:58	GEN9	ECL 2
Total/NA	Prep	3510C			100.0 mL	10 mL	155680	06/08/21 07:19	PQS1	ECL 1
Total/NA	Analysis	8270C SIM ID		1			156222	06/09/21 20:20	ULLI	ECL 1

**Client Sample ID: OC\_SP210\_INF\_060221**

**Lab Sample ID: 440-284202-2**

Matrix: Water

Date Collected: 06/02/21 12:05

Date Received: 06/04/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B	DL	5	20 mL	20 mL	155395	06/07/21 20:57	GEN9	ECL 2
Total/NA	Analysis	8260B		1	20 mL	20 mL	155998	06/09/21 14:56	UJHB	ECL 2

**Client Sample ID: OC\_TB\_060221**

**Lab Sample ID: 440-284202-3**

Matrix: Water

Date Collected: 06/02/21 11:55

Date Received: 06/04/21 15:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	155395	06/07/21 13:31	GEN9	ECL 2

**Laboratory References:**

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

ECL 2 = Eurofins Calscience LLC Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 570-155395/8**

**Matrix: Water**

**Analysis Batch: 155395**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L		06/07/21 12:02		1
1,1,1-Trichloroethane	ND		0.50	ug/L		06/07/21 12:02		1
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L		06/07/21 12:02		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	ug/L		06/07/21 12:02		1
1,1,2-Trichloroethane	ND		0.50	ug/L		06/07/21 12:02		1
1,1-Dichloroethane	ND		0.50	ug/L		06/07/21 12:02		1
1,1-Dichloroethene	ND		0.50	ug/L		06/07/21 12:02		1
1,1-Dichloropropene	ND		0.50	ug/L		06/07/21 12:02		1
1,2,3-Trichlorobenzene	ND		0.50	ug/L		06/07/21 12:02		1
1,2,3-Trichloropropane	ND		0.50	ug/L		06/07/21 12:02		1
1,2,4-Trichlorobenzene	ND		0.50	ug/L		06/07/21 12:02		1
1,2,4-Trimethylbenzene	ND		0.50	ug/L		06/07/21 12:02		1
1,2-Dibromo-3-Chloropropane	ND		1.0	ug/L		06/07/21 12:02		1
1,2-Dibromoethane	ND		0.50	ug/L		06/07/21 12:02		1
1,2-Dichlorobenzene	ND		0.50	ug/L		06/07/21 12:02		1
1,2-Dichloroethane	ND		0.50	ug/L		06/07/21 12:02		1
1,2-Dichloropropane	ND		0.50	ug/L		06/07/21 12:02		1
1,3,5-Trimethylbenzene	ND		0.50	ug/L		06/07/21 12:02		1
1,3-Dichlorobenzene	ND		0.50	ug/L		06/07/21 12:02		1
1,3-Dichloropropane	ND		0.50	ug/L		06/07/21 12:02		1
1,4-Dichlorobenzene	ND		0.50	ug/L		06/07/21 12:02		1
2,2-Dichloropropane	ND		0.50	ug/L		06/07/21 12:02		1
2-Butanone	ND		5.0	ug/L		06/07/21 12:02		1
2-Chlorotoluene	ND		0.50	ug/L		06/07/21 12:02		1
2-Hexanone	ND		6.0	ug/L		06/07/21 12:02		1
4-Chlorotoluene	ND		0.50	ug/L		06/07/21 12:02		1
Acetone	ND		8.0	ug/L		06/07/21 12:02		1
Benzene	ND		0.50	ug/L		06/07/21 12:02		1
Bromobenzene	ND		0.50	ug/L		06/07/21 12:02		1
Bromochloromethane	ND		1.0	ug/L		06/07/21 12:02		1
Bromodichloromethane	ND		0.50	ug/L		06/07/21 12:02		1
Bromoform	ND		0.50	ug/L		06/07/21 12:02		1
Bromomethane	ND		1.0	ug/L		06/07/21 12:02		1
Carbon tetrachloride	ND		0.50	ug/L		06/07/21 12:02		1
Chlorobenzene	ND		0.50	ug/L		06/07/21 12:02		1
Chloroethane	ND		0.50	ug/L		06/07/21 12:02		1
Chloroform	ND		0.50	ug/L		06/07/21 12:02		1
Chloromethane	ND		1.0	ug/L		06/07/21 12:02		1
cis-1,2-Dichloroethene	ND		0.50	ug/L		06/07/21 12:02		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		06/07/21 12:02		1
Dibromochloromethane	ND		0.50	ug/L		06/07/21 12:02		1
Dibromomethane	ND		0.50	ug/L		06/07/21 12:02		1
Dichlorodifluoromethane	ND		1.0	ug/L		06/07/21 12:02		1
Ethylbenzene	ND		0.50	ug/L		06/07/21 12:02		1
Hexachloro-1,3-butadiene	ND		1.0	ug/L		06/07/21 12:02		1
Isopropanol	ND		40	ug/L		06/07/21 12:02		1
Isopropylbenzene	ND		0.50	ug/L		06/07/21 12:02		1
m,p-Xylene	ND		1.0	ug/L		06/07/21 12:02		1

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** MB 570-155395/8

**Matrix:** Water

**Analysis Batch:** 155395

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB	MB	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac								
Methylene Chloride	ND				1.0	ug/L			06/07/21 12:02	1								
Naphthalene	ND				1.0	ug/L			06/07/21 12:02	1								
n-Butylbenzene	ND				0.50	ug/L			06/07/21 12:02	1								
N-Propylbenzene	ND				0.50	ug/L			06/07/21 12:02	1								
o-Xylene	ND				0.50	ug/L			06/07/21 12:02	1								
p-Isopropyltoluene	ND				0.50	ug/L			06/07/21 12:02	1								
sec-Butylbenzene	ND				0.50	ug/L			06/07/21 12:02	1								
Styrene	ND				0.50	ug/L			06/07/21 12:02	1								
tert-Butylbenzene	ND				0.50	ug/L			06/07/21 12:02	1								
Tetrachloroethene	ND				0.50	ug/L			06/07/21 12:02	1								
Toluene	ND				0.50	ug/L			06/07/21 12:02	1								
Total Volatile Organic Compounds	ND				150	ug/L			06/07/21 12:02	1								
trans-1,2-Dichloroethene	ND				0.50	ug/L			06/07/21 12:02	1								
trans-1,3-Dichloropropene	ND				0.50	ug/L			06/07/21 12:02	1								
Trichloroethene	ND				0.50	ug/L			06/07/21 12:02	1								
Trichlorofluoromethane	ND				0.50	ug/L			06/07/21 12:02	1								
Vinyl acetate	ND				5.0	ug/L			06/07/21 12:02	1								
Vinyl chloride	ND				0.50	ug/L			06/07/21 12:02	1								
<b>MB MB</b>		<b>MB MB</b>		<b>Surrogate</b>		<b>%Recovery</b>		<b>Qualifier</b>		<b>Limits</b>		<b>Prepared</b>		<b>Analyzed</b>		<b>Dil Fac</b>		
1,2-Dichloroethane-d4 (Surr)			101							68 - 135								
4-Bromofluorobenzene (Surr)			98							71 - 120								
Dibromofluoromethane (Surr)			104							80 - 120								
Toluene-d8 (Surr)			100							80 - 120								

**Lab Sample ID:** LCS 570-155395/4

**Matrix:** Water

**Analysis Batch:** 155395

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	Spike Added	LC S	LC S	Unit	D	%Rec	Limits
		Result	Qualifier				
1,1,1,2-Tetrachloroethane	10.0	10.8		ug/L		108	76 - 143
1,1,1-Trichloroethane	10.0	10.8		ug/L		108	75 - 128
1,1,2,2-Tetrachloroethane	10.0	10.2		ug/L		102	73 - 126
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.3		ug/L		103	50 - 120
1,1,2-Trichloroethane	10.0	10.2		ug/L		102	80 - 120
1,1-Dichloroethane	10.0	9.68		ug/L		97	76 - 120
1,1-Dichloroethene	10.0	9.90		ug/L		99	72 - 120
1,1-Dichloropropene	10.0	10.2		ug/L		102	76 - 120
1,2,3-Trichlorobenzene	10.0	11.1		ug/L		111	80 - 125
1,2,3-Trichloropropane	10.0	7.91		ug/L		79	66 - 131
1,2,4-Trichlorobenzene	10.0	10.7		ug/L		107	80 - 123
1,2,4-Trimethylbenzene	10.0	11.0		ug/L		110	78 - 125
1,2-Dibromo-3-Chloropropane	10.0	10.2		ug/L		102	77 - 120
1,2-Dibromoethane	10.0	9.92		ug/L		99	80 - 120
1,2-Dichlorobenzene	10.0	10.6		ug/L		106	79 - 123
1,2-Dichloroethane	10.0	9.77		ug/L		98	71 - 137
1,2-Dichloropropane	10.0	10.6		ug/L		106	80 - 120
1,3,5-Trimethylbenzene	10.0	11.3		ug/L		113	77 - 133

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 570-155395/4**

**Matrix: Water**

**Analysis Batch: 155395**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,3-Dichlorobenzene	10.0	10.6		ug/L	106	79 - 123	
1,3-Dichloropropane	10.0	10.0		ug/L	100	80 - 123	
1,4-Dichlorobenzene	10.0	10.7		ug/L	107	75 - 123	
2,2-Dichloropropane	10.0	12.1		ug/L	121	78 - 133	
2-Butanone	10.0	9.54		ug/L	95	32 - 133	
2-Chlorotoluene	10.0	10.8		ug/L	108	80 - 120	
2-Hexanone	10.0	9.14		ug/L	91	57 - 127	
4-Chlorotoluene	10.0	10.2		ug/L	102	78 - 120	
Acetone	10.0	8.48		ug/L	85	57 - 133	
Benzene	10.0	10.3		ug/L	103	80 - 120	
Bromobenzene	10.0	10.8		ug/L	108	80 - 124	
Bromochloromethane	10.0	9.96		ug/L	100	76 - 125	
Bromodichloromethane	10.0	11.1		ug/L	111	77 - 141	
Bromoform	10.0	11.3		ug/L	113	46 - 178	
Bromomethane	10.0	9.69		ug/L	97	52 - 162	
Carbon tetrachloride	10.0	11.3		ug/L	113	69 - 145	
Chlorobenzene	10.0	10.4		ug/L	104	80 - 120	
Chloroethane	10.0	9.13		ug/L	91	73 - 139	
Chloroform	10.0	10.1		ug/L	101	80 - 120	
Chloromethane	10.0	11.0		ug/L	110	35 - 159	
cis-1,2-Dichloroethene	10.0	10.2		ug/L	102	76 - 122	
cis-1,3-Dichloropropene	10.0	10.1		ug/L	101	80 - 122	
Dibromochloromethane	10.0	11.1		ug/L	111	63 - 151	
Dibromomethane	10.0	10.6		ug/L	106	80 - 121	
Dichlorodifluoromethane	10.0	9.34		ug/L	93	59 - 139	
Ethylbenzene	10.0	10.6		ug/L	106	80 - 120	
Hexachloro-1,3-butadiene	10.0	11.2		ug/L	112	76 - 141	
Isopropanol	100	95.7		ug/L	96	29 - 141	
Isopropylbenzene	10.0	11.0		ug/L	110	80 - 124	
m,p-Xylene	20.0	20.7		ug/L	104	80 - 122	
Methylene Chloride	10.0	9.64		ug/L	96	70 - 120	
Naphthalene	10.0	11.0		ug/L	110	75 - 120	
n-Butylbenzene	10.0	11.5		ug/L	115	76 - 124	
N-Propylbenzene	10.0	11.2		ug/L	112	80 - 122	
o-Xylene	10.0	10.8		ug/L	108	80 - 122	
p-Isopropyltoluene	10.0	11.3		ug/L	113	77 - 127	
sec-Butylbenzene	10.0	11.0		ug/L	110	75 - 123	
Styrene	10.0	10.3		ug/L	103	80 - 121	
tert-Butylbenzene	10.0	10.5		ug/L	105	72 - 128	
Tetrachloroethene	10.0	10.7		ug/L	107	80 - 128	
Toluene	10.0	10.4		ug/L	104	80 - 120	
trans-1,2-Dichloroethene	10.0	10.1		ug/L	101	67 - 123	
trans-1,3-Dichloropropene	10.0	9.71		ug/L	97	78 - 140	
Trichloroethene	10.0	11.0		ug/L	110	80 - 123	
Trichlorofluoromethane	10.0	9.51		ug/L	95	64 - 168	
Vinyl acetate	10.0	11.5		ug/L	115	75 - 144	
Vinyl chloride	10.0	9.47		ug/L	95	74 - 130	

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 570-155395/4**

**Matrix: Water**

**Analysis Batch: 155395**

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97				68 - 135
4-Bromofluorobenzene (Surr)	100				71 - 120
Dibromofluoromethane (Surr)	99				80 - 120
Toluene-d8 (Surr)	102				80 - 120

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

**Lab Sample ID: LCSD 570-155395/5**

**Matrix: Water**

**Analysis Batch: 155395**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	10.0	11.7		ug/L		117	76 - 143	8	20
1,1,1-Trichloroethane	10.0	12.2		ug/L		122	75 - 128	12	20
1,1,2,2-Tetrachloroethane	10.0	10.5		ug/L		105	73 - 126	3	21
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	11.4		ug/L		114	50 - 120	10	20
1,1,2-Trichloroethane	10.0	10.5		ug/L		105	80 - 120	2	20
1,1-Dichloroethane	10.0	10.9		ug/L		109	76 - 120	12	20
1,1-Dichloroethene	10.0	11.1		ug/L		111	72 - 120	12	20
1,1-Dichloropropene	10.0	11.7		ug/L		117	76 - 120	14	20
1,2,3-Trichlorobenzene	10.0	11.1		ug/L		111	80 - 125	0	22
1,2,3-Trichloropropane	10.0	7.82		ug/L		78	66 - 131	1	20
1,2,4-Trichlorobenzene	10.0	11.0		ug/L		110	80 - 123	3	20
1,2,4-Trimethylbenzene	10.0	11.4		ug/L		114	78 - 125	3	22
1,2-Dibromo-3-Chloropropane	10.0	9.20		ug/L		92	77 - 120	10	21
1,2-Dibromoethane	10.0	10.7		ug/L		107	80 - 120	7	20
1,2-Dichlorobenzene	10.0	10.8		ug/L		108	79 - 123	2	20
1,2-Dichloroethane	10.0	10.1		ug/L		101	71 - 137	4	20
1,2-Dichloropropane	10.0	11.0		ug/L		110	80 - 120	4	20
1,3,5-Trimethylbenzene	10.0	11.9		ug/L		119	77 - 133	5	20
1,3-Dichlorobenzene	10.0	10.9		ug/L		109	79 - 123	3	20
1,3-Dichloropropane	10.0	11.1		ug/L		111	80 - 123	10	20
1,4-Dichlorobenzene	10.0	10.7		ug/L		107	75 - 123	0	22
2,2-Dichloropropane	10.0	13.0		ug/L		130	78 - 133	7	20
2-Butanone	10.0	9.33		ug/L		93	32 - 133	2	26
2-Chlorotoluene	10.0	11.2		ug/L		112	80 - 120	4	20
2-Hexanone	10.0	9.39		ug/L		94	57 - 127	3	21
4-Chlorotoluene	10.0	10.8		ug/L		108	78 - 120	5	21
Acetone	10.0	11.0		ug/L		110	57 - 133	26	28
Benzene	10.0	10.8		ug/L		108	80 - 120	5	20
Bromobenzene	10.0	11.3		ug/L		113	80 - 124	5	20
Bromochloromethane	10.0	10.6		ug/L		106	76 - 125	6	20
Bromodichloromethane	10.0	11.2		ug/L		112	77 - 141	1	20
Bromoform	10.0	11.2		ug/L		112	46 - 178	1	23
Bromomethane	10.0	10.9		ug/L		109	52 - 162	12	20
Carbon tetrachloride	10.0	12.3		ug/L		123	69 - 145	9	20
Chlorobenzene	10.0	11.0		ug/L		110	80 - 120	5	20
Chloroethane	10.0	10.2		ug/L		102	73 - 139	11	20
Chloroform	10.0	11.5		ug/L		115	80 - 120	12	20
Chloromethane	10.0	11.6		ug/L		116	35 - 159	6	20

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 570-155395/5**

**Matrix: Water**

**Analysis Batch: 155395**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	RPD Limit
cis-1,2-Dichloroethene	10.0	11.3		ug/L	113	76 - 122	11	20	
cis-1,3-Dichloropropene	10.0	10.6		ug/L	106	80 - 122	5	20	
Dibromochloromethane	10.0	11.8		ug/L	118	63 - 151	6	20	
Dibromomethane	10.0	10.7		ug/L	107	80 - 121	1	20	
Dichlorodifluoromethane	10.0	10.7		ug/L	107	59 - 139	13	20	
Ethylbenzene	10.0	11.2		ug/L	112	80 - 120	5	20	
Hexachloro-1,3-butadiene	10.0	11.6		ug/L	116	76 - 141	3	23	
Isopropanol	100	108		ug/L	108	29 - 141	12	22	
Isopropylbenzene	10.0	11.7		ug/L	117	80 - 124	6	20	
m,p-Xylene	20.0	22.0		ug/L	110	80 - 122	6	20	
Methylene Chloride	10.0	10.4		ug/L	104	70 - 120	8	20	
Naphthalene	10.0	11.4		ug/L	114	75 - 120	4	22	
n-Butylbenzene	10.0	11.9		ug/L	119	76 - 124	4	23	
N-Propylbenzene	10.0	11.9		ug/L	119	80 - 122	6	20	
o-Xylene	10.0	11.5		ug/L	115	80 - 122	6	20	
p-Isopropyltoluene	10.0	11.9		ug/L	119	77 - 127	5	21	
sec-Butylbenzene	10.0	11.4		ug/L	114	75 - 123	4	21	
Styrene	10.0	10.7		ug/L	107	80 - 121	4	20	
tert-Butylbenzene	10.0	11.3		ug/L	113	72 - 128	8	22	
Tetrachloroethene	10.0	11.5		ug/L	115	80 - 128	7	20	
Toluene	10.0	10.8		ug/L	108	80 - 120	4	20	
trans-1,2-Dichloroethene	10.0	11.3		ug/L	113	67 - 123	10	20	
trans-1,3-Dichloropropene	10.0	10.2		ug/L	102	78 - 140	5	20	
Trichloroethene	10.0	11.8		ug/L	118	80 - 123	7	20	
Trichlorofluoromethane	10.0	10.9		ug/L	109	64 - 168	14	20	
Vinyl acetate	10.0	10.6		ug/L	106	75 - 144	8	25	
Vinyl chloride	10.0	10.6		ug/L	106	74 - 130	11	20	

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		68 - 135
4-Bromofluorobenzene (Surr)	103		71 - 120
Dibromofluoromethane (Surr)	103		80 - 120
Toluene-d8 (Surr)	99		80 - 120

**Lab Sample ID: MB 570-155998/8**

**Matrix: Water**

**Analysis Batch: 155998**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L		06/09/21 11:58		1
1,1,1-Trichloroethane	ND		0.50	ug/L		06/09/21 11:58		1
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L		06/09/21 11:58		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	ug/L		06/09/21 11:58		1
1,1,2-Trichloroethane	ND		0.50	ug/L		06/09/21 11:58		1
1,1-Dichloroethane	ND		0.50	ug/L		06/09/21 11:58		1
1,1-Dichloroethene	ND		0.50	ug/L		06/09/21 11:58		1
1,1-Dichloropropene	ND		0.50	ug/L		06/09/21 11:58		1
1,2,3-Trichlorobenzene	ND		0.50	ug/L		06/09/21 11:58		1

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** MB 570-155998/8

**Matrix:** Water

**Analysis Batch:** 155998

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB	MB	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND				0.50	ug/L		06/09/21 11:58		1
1,2,4-Trichlorobenzene	ND				0.50	ug/L		06/09/21 11:58		1
1,2,4-Trimethylbenzene	ND				0.50	ug/L		06/09/21 11:58		1
1,2-Dibromo-3-Chloropropane	ND				1.0	ug/L		06/09/21 11:58		1
1,2-Dibromoethane	ND				0.50	ug/L		06/09/21 11:58		1
1,2-Dichlorobenzene	ND				0.50	ug/L		06/09/21 11:58		1
1,2-Dichloroethane	ND				0.50	ug/L		06/09/21 11:58		1
1,2-Dichloropropane	ND				0.50	ug/L		06/09/21 11:58		1
1,3,5-Trimethylbenzene	ND				0.50	ug/L		06/09/21 11:58		1
1,3-Dichlorobenzene	ND				0.50	ug/L		06/09/21 11:58		1
1,3-Dichloropropane	ND				0.50	ug/L		06/09/21 11:58		1
1,4-Dichlorobenzene	ND				0.50	ug/L		06/09/21 11:58		1
2,2-Dichloropropane	ND				0.50	ug/L		06/09/21 11:58		1
2-Butanone	ND				5.0	ug/L		06/09/21 11:58		1
2-Chlorotoluene	ND				0.50	ug/L		06/09/21 11:58		1
2-Hexanone	ND				6.0	ug/L		06/09/21 11:58		1
4-Chlorotoluene	ND				0.50	ug/L		06/09/21 11:58		1
Acetone	ND				8.0	ug/L		06/09/21 11:58		1
Benzene	ND				0.50	ug/L		06/09/21 11:58		1
Bromobenzene	ND				0.50	ug/L		06/09/21 11:58		1
Bromochloromethane	ND				1.0	ug/L		06/09/21 11:58		1
Bromodichloromethane	ND				0.50	ug/L		06/09/21 11:58		1
Bromoform	ND				0.50	ug/L		06/09/21 11:58		1
Bromomethane	ND				1.0	ug/L		06/09/21 11:58		1
Carbon tetrachloride	ND				0.50	ug/L		06/09/21 11:58		1
Chlorobenzene	ND				0.50	ug/L		06/09/21 11:58		1
Chloroethane	ND				0.50	ug/L		06/09/21 11:58		1
Chloroform	ND				0.50	ug/L		06/09/21 11:58		1
Chloromethane	ND				1.0	ug/L		06/09/21 11:58		1
cis-1,2-Dichloroethene	ND				0.50	ug/L		06/09/21 11:58		1
cis-1,3-Dichloropropene	ND				0.50	ug/L		06/09/21 11:58		1
Dibromochloromethane	ND				0.50	ug/L		06/09/21 11:58		1
Dibromomethane	ND				0.50	ug/L		06/09/21 11:58		1
Dichlorodifluoromethane	ND				1.0	ug/L		06/09/21 11:58		1
Ethylbenzene	ND				0.50	ug/L		06/09/21 11:58		1
Hexachloro-1,3-butadiene	ND				1.0	ug/L		06/09/21 11:58		1
Isopropanol	ND				40	ug/L		06/09/21 11:58		1
Isopropylbenzene	ND				0.50	ug/L		06/09/21 11:58		1
m,p-Xylene	ND				1.0	ug/L		06/09/21 11:58		1
Methylene Chloride	ND				1.0	ug/L		06/09/21 11:58		1
Naphthalene	ND				1.0	ug/L		06/09/21 11:58		1
n-Butylbenzene	ND				0.50	ug/L		06/09/21 11:58		1
N-Propylbenzene	ND				0.50	ug/L		06/09/21 11:58		1
o-Xylene	ND				0.50	ug/L		06/09/21 11:58		1
p-Isopropyltoluene	ND				0.50	ug/L		06/09/21 11:58		1
sec-Butylbenzene	ND				0.50	ug/L		06/09/21 11:58		1
Styrene	ND				0.50	ug/L		06/09/21 11:58		1
tert-Butylbenzene	ND				0.50	ug/L		06/09/21 11:58		1
Tetrachloroethene	ND				0.50	ug/L		06/09/21 11:58		1

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** MB 570-155998/8

**Matrix:** Water

**Analysis Batch:** 155998

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB	MB	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifer								
Toluene	ND				0.50	ug/L			06/09/21 11:58	1
Total Volatile Organic Compounds	ND				150	ug/L			06/09/21 11:58	1
trans-1,2-Dichloroethene	ND				0.50	ug/L			06/09/21 11:58	1
trans-1,3-Dichloropropene	ND				0.50	ug/L			06/09/21 11:58	1
Trichloroethene	ND				0.50	ug/L			06/09/21 11:58	1
Trichlorofluoromethane	ND				0.50	ug/L			06/09/21 11:58	1
Vinyl acetate	ND				5.0	ug/L			06/09/21 11:58	1
Vinyl chloride	ND				0.50	ug/L			06/09/21 11:58	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifer						
1,2-Dichloroethane-d4 (Surr)	89				68 - 135			1
4-Bromofluorobenzene (Surr)	100				71 - 120			1
Dibromofluoromethane (Surr)	101				80 - 120			1
Toluene-d8 (Surr)	100				80 - 120			1

**Lab Sample ID:** LCS 570-155998/4

**Matrix:** Water

**Analysis Batch:** 155998

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	%Rec.
	Added	Result	Qualifier					
1,1,1,2-Tetrachloroethane	10.0	11.0		ug/L		110	76 - 143	
1,1,1-Trichloroethane	10.0	10.9		ug/L		109	75 - 128	
1,1,2,2-Tetrachloroethane	10.0	10.1		ug/L		101	73 - 126	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.3		ug/L		103	50 - 120	
1,1,2-Trichloroethane	10.0	10.2		ug/L		102	80 - 120	
1,1-Dichloroethane	10.0	10.3		ug/L		103	76 - 120	
1,1-Dichloroethene	10.0	10.2		ug/L		102	72 - 120	
1,1-Dichloropropene	10.0	10.3		ug/L		103	76 - 120	
1,2,3-Trichlorobenzene	10.0	11.0		ug/L		110	80 - 125	
1,2,3-Trichloropropane	10.0	9.68		ug/L		97	66 - 131	
1,2,4-Trichlorobenzene	10.0	10.8		ug/L		108	80 - 123	
1,2,4-Trimethylbenzene	10.0	10.8		ug/L		108	78 - 125	
1,2-Dibromo-3-Chloropropane	10.0	9.55		ug/L		96	77 - 120	
1,2-Dibromoethane	10.0	10.3		ug/L		103	80 - 120	
1,2-Dichlorobenzene	10.0	10.1		ug/L		101	79 - 123	
1,2-Dichloroethane	10.0	9.46		ug/L		95	71 - 137	
1,2-Dichloropropane	10.0	10.4		ug/L		104	80 - 120	
1,3,5-Trimethylbenzene	10.0	11.0		ug/L		110	77 - 133	
1,3-Dichlorobenzene	10.0	10.4		ug/L		104	79 - 123	
1,3-Dichloropropane	10.0	10.2		ug/L		102	80 - 123	
1,4-Dichlorobenzene	10.0	10.5		ug/L		105	75 - 123	
2,2-Dichloropropane	10.0	11.7		ug/L		117	78 - 133	
2-Butanone	10.0	9.55		ug/L		95	32 - 133	
2-Chlorotoluene	10.0	10.3		ug/L		103	80 - 120	
2-Hexanone	10.0	7.79		ug/L		78	57 - 127	
4-Chlorotoluene	10.0	10.0		ug/L		100	78 - 120	
Acetone	10.0	11.1		ug/L		111	57 - 133	
Benzene	10.0	10.2		ug/L		102	80 - 120	

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 570-155998/4**

**Matrix: Water**

**Analysis Batch: 155998**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Bromobenzene	10.0	10.5		ug/L		105	80 - 124
Bromochloromethane	10.0	10.0		ug/L		100	76 - 125
Bromodichloromethane	10.0	10.7		ug/L		107	77 - 141
Bromoform	10.0	10.9		ug/L		109	46 - 178
Bromomethane	10.0	9.48		ug/L		95	52 - 162
Carbon tetrachloride	10.0	11.2		ug/L		112	69 - 145
Chlorobenzene	10.0	10.5		ug/L		105	80 - 120
Chloroethane	10.0	9.42		ug/L		94	73 - 139
Chloroform	10.0	10.6		ug/L		106	80 - 120
Chloromethane	10.0	10.1		ug/L		101	35 - 159
cis-1,2-Dichloroethene	10.0	10.5		ug/L		105	76 - 122
cis-1,3-Dichloropropene	10.0	10.2		ug/L		102	80 - 122
Dibromochloromethane	10.0	11.5		ug/L		115	63 - 151
Dibromomethane	10.0	10.2		ug/L		102	80 - 121
Dichlorodifluoromethane	10.0	8.57		ug/L		86	59 - 139
Ethylbenzene	10.0	10.4		ug/L		104	80 - 120
Hexachloro-1,3-butadiene	10.0	10.4		ug/L		104	76 - 141
Isopropanol	100	103		ug/L		103	29 - 141
Isopropylbenzene	10.0	10.8		ug/L		108	80 - 124
m,p-Xylene	20.0	20.1		ug/L		101	80 - 122
Methylene Chloride	10.0	9.65		ug/L		96	70 - 120
Naphthalene	10.0	10.9		ug/L		109	75 - 120
n-Butylbenzene	10.0	11.1		ug/L		111	76 - 124
N-Propylbenzene	10.0	10.8		ug/L		108	80 - 122
o-Xylene	10.0	10.5		ug/L		105	80 - 122
p-Isopropyltoluene	10.0	11.0		ug/L		110	77 - 127
sec-Butylbenzene	10.0	10.7		ug/L		107	75 - 123
Styrene	10.0	9.79		ug/L		98	80 - 121
tert-Butylbenzene	10.0	10.7		ug/L		107	72 - 128
Tetrachloroethene	10.0	10.7		ug/L		107	80 - 128
Toluene	10.0	10.3		ug/L		103	80 - 120
trans-1,2-Dichloroethene	10.0	10.2		ug/L		102	67 - 123
trans-1,3-Dichloropropene	10.0	9.92		ug/L		99	78 - 140
Trichloroethene	10.0	10.8		ug/L		108	80 - 123
Trichlorofluoromethane	10.0	9.37		ug/L		94	64 - 168
Vinyl acetate	10.0	11.6		ug/L		116	75 - 144
Vinyl chloride	10.0	9.24		ug/L		92	74 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		68 - 135
4-Bromofluorobenzene (Surr)	98		71 - 120
Dibromofluoromethane (Surr)	103		80 - 120
Toluene-d8 (Surr)	100		80 - 120

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 570-155998/5**

**Matrix: Water**

**Analysis Batch: 155998**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	10.0	11.6		ug/L		116	76 - 143	5	20
1,1,1-Trichloroethane	10.0	11.4		ug/L		114	75 - 128	4	20
1,1,2,2-Tetrachloroethane	10.0	10.1		ug/L		101	73 - 126	0	21
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	11.0		ug/L		110	50 - 120	7	20
1,1,2-Trichloroethane	10.0	10.6		ug/L		106	80 - 120	3	20
1,1-Dichloroethane	10.0	10.6		ug/L		106	76 - 120	2	20
1,1-Dichloroethene	10.0	10.7		ug/L		107	72 - 120	5	20
1,1-Dichloropropene	10.0	11.2		ug/L		112	76 - 120	8	20
1,2,3-Trichlorobenzene	10.0	11.0		ug/L		110	80 - 125	0	22
1,2,3-Trichloropropane	10.0	10.1		ug/L		101	66 - 131	4	20
1,2,4-Trichlorobenzene	10.0	11.1		ug/L		111	80 - 123	3	20
1,2,4-Trimethylbenzene	10.0	11.6		ug/L		116	78 - 125	7	22
1,2-Dibromo-3-Chloropropane	10.0	9.49		ug/L		95	77 - 120	1	21
1,2-Dibromoethane	10.0	11.1		ug/L		111	80 - 120	7	20
1,2-Dichlorobenzene	10.0	10.9		ug/L		109	79 - 123	8	20
1,2-Dichloroethane	10.0	9.49		ug/L		95	71 - 137	0	20
1,2-Dichloropropane	10.0	10.6		ug/L		106	80 - 120	2	20
1,3,5-Trimethylbenzene	10.0	11.8		ug/L		118	77 - 133	8	20
1,3-Dichlorobenzene	10.0	11.1		ug/L		111	79 - 123	7	20
1,3-Dichloropropane	10.0	10.9		ug/L		109	80 - 123	6	20
1,4-Dichlorobenzene	10.0	11.1		ug/L		111	75 - 123	5	22
2,2-Dichloropropane	10.0	12.1		ug/L		121	78 - 133	3	20
2-Butanone	10.0	9.98		ug/L		100	32 - 133	4	26
2-Chlorotoluene	10.0	11.2		ug/L		112	80 - 120	8	20
2-Hexanone	10.0	8.85		ug/L		89	57 - 127	13	21
4-Chlorotoluene	10.0	10.7		ug/L		107	78 - 120	7	21
Acetone	10.0	10.9		ug/L		109	57 - 133	1	28
Benzene	10.0	10.3		ug/L		103	80 - 120	1	20
Bromobenzene	10.0	11.4		ug/L		114	80 - 124	8	20
Bromochloromethane	10.0	10.2		ug/L		102	76 - 125	1	20
Bromodichloromethane	10.0	10.7		ug/L		107	77 - 141	0	20
Bromoform	10.0	11.8		ug/L		118	46 - 178	8	23
Bromomethane	10.0	9.79		ug/L		98	52 - 162	3	20
Carbon tetrachloride	10.0	11.6		ug/L		116	69 - 145	4	20
Chlorobenzene	10.0	11.2		ug/L		112	80 - 120	6	20
Chloroethane	10.0	9.86		ug/L		99	73 - 139	5	20
Chloroform	10.0	10.9		ug/L		109	80 - 120	3	20
Chloromethane	10.0	11.1		ug/L		111	35 - 159	10	20
cis-1,2-Dichloroethene	10.0	10.8		ug/L		108	76 - 122	2	20
cis-1,3-Dichloropropene	10.0	10.1		ug/L		101	80 - 122	1	20
Dibromochloromethane	10.0	11.5		ug/L		115	63 - 151	0	20
Dibromomethane	10.0	10.1		ug/L		101	80 - 121	1	20
Dichlorodifluoromethane	10.0	9.44		ug/L		94	59 - 139	10	20
Ethylbenzene	10.0	11.3		ug/L		113	80 - 120	8	20
Hexachloro-1,3-butadiene	10.0	11.4		ug/L		114	76 - 141	9	23
Isopropanol	100	105		ug/L		105	29 - 141	2	22
Isopropylbenzene	10.0	11.9		ug/L		119	80 - 124	10	20
m,p-Xylene	20.0	22.5		ug/L		112	80 - 122	11	20

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCSD 570-155998/5

**Client Sample ID:** Lab Control Sample Dup  
**Prep Type:** Total/NA

**Matrix:** Water

**Analysis Batch:** 155998

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	RPD Limit
Methylene Chloride	10.0	10.2		ug/L		102	70 - 120	6	20
Naphthalene	10.0	11.2		ug/L		112	75 - 120	3	22
n-Butylbenzene	10.0	11.8		ug/L		118	76 - 124	6	23
N-Propylbenzene	10.0	11.6		ug/L		116	80 - 122	7	20
o-Xylene	10.0	11.3		ug/L		113	80 - 122	8	20
p-Isopropyltoluene	10.0	11.8		ug/L		118	77 - 127	7	21
sec-Butylbenzene	10.0	11.4		ug/L		114	75 - 123	7	21
Styrene	10.0	11.0		ug/L		110	80 - 121	11	20
tert-Butylbenzene	10.0	11.4		ug/L		114	72 - 128	6	22
Tetrachloroethene	10.0	11.5		ug/L		115	80 - 128	7	20
Toluene	10.0	10.4		ug/L		104	80 - 120	1	20
trans-1,2-Dichloroethene	10.0	10.7		ug/L		107	67 - 123	4	20
trans-1,3-Dichloropropene	10.0	10.2		ug/L		102	78 - 140	2	20
Trichloroethene	10.0	10.7		ug/L		107	80 - 123	0	20
Trichlorofluoromethane	10.0	9.85		ug/L		98	64 - 168	5	20
Vinyl acetate	10.0	9.22		ug/L		92	75 - 144	22	25
Vinyl chloride	10.0	10.3		ug/L		103	74 - 130	10	20

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	100		68 - 135
4-Bromofluorobenzene (Surr)	103		71 - 120
Dibromofluoromethane (Surr)	101		80 - 120
Toluene-d8 (Surr)	96		80 - 120

## Method: 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

**Lab Sample ID:** MB 570-155680/1-A

**Matrix:** Water

**Analysis Batch:** 156222

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA  
**Prep Batch:** 155680

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier				0.10	ug/L	
<b>Isotope Dilution</b>								
Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac	Prepared	Analyzed
	%Recovery	Qualifier					06/08/21 07:19	06/09/21 19:02
1,4-Dioxane-d8	39		15 - 150					
<b>Surrogate</b>								
Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac	Prepared	Analyzed
	%Recovery	Qualifier					06/08/21 07:19	06/09/21 19:02
Nitrobenzene-d5 (Surr)	90		46 - 128					

**Lab Sample ID:** LCS 570-155680/2-A

**Matrix:** Water

**Analysis Batch:** 156222

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA  
**Prep Batch:** 155680

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier					
<b>Isotope Dilution</b>								
Isotope Dilution	LCS	LCS	Limits	Prepared	Analyzed	Dil Fac	Prepared	Analyzed
	%Recovery	Qualifier					06/08/21 07:19	06/09/21 19:02
1,4-Dioxane-d8	33		15 - 150					

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

## **Method: 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution) (Continued)**

**Lab Sample ID: LCS 570-155680/2-A**  
**Matrix: Water**  
**Analysis Batch: 156222**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 155680**

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
Nitrobenzene-d5 (Surr)			86		46 - 128

**Lab Sample ID: LCSD 570-155680/3-A**  
**Matrix: Water**  
**Analysis Batch: 156222**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 155680**

Analyte	LCSD	LCSD	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	Limit	
1,4-Dioxane			20.0	21.7		ug/L		109	57 - 136	1	20
Isotope Dilution	LCSD	LCSD	%Recovery	Qualifier	Limits						
1,4-Dioxane-d8			30		15 - 150						
Surrogate	LCSD	LCSD	%Recovery	Qualifier	Limits						
Nitrobenzene-d5 (Surr)			101		46 - 128						

**Lab Sample ID: 440-284202-1 MS**  
**Matrix: Water**  
**Analysis Batch: 156222**

**Client Sample ID: OC\_SP220B\_EFF\_060221**  
**Prep Type: Total/NA**  
**Prep Batch: 155680**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	RPD	Limit
1,4-Dioxane	22		20.0	42.0		ug/L		101	45 - 139	
Isotope Dilution	MS	MS	%Recovery	Qualifier	Limits					
1,4-Dioxane-d8			26		15 - 150					
Surrogate	MS	MS	%Recovery	Qualifier	Limits					
Nitrobenzene-d5 (Surr)			97		46 - 128					

**Lab Sample ID: 440-284202-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 156222**

**Client Sample ID: OC\_SP220B\_EFF\_060221**  
**Prep Type: Total/NA**  
**Prep Batch: 155680**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	Limit	
1,4-Dioxane	22		20.0	43.7		ug/L		109	45 - 139	4	17
Isotope Dilution	MSD	MSD	%Recovery	Qualifier	Limits						
1,4-Dioxane-d8			28		15 - 150						
Surrogate	MSD	MSD	%Recovery	Qualifier	Limits						
Nitrobenzene-d5 (Surr)			100		46 - 128						

# QC Association Summary

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
 SDG: Omega Chemical

## GC/MS VOA

### Analysis Batch: 155395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-284202-1	OC_SP220B_EFF_060221	Total/NA	Water	8260B	
440-284202-2 - DL	OC_SP210_INF_060221	Total/NA	Water	8260B	
440-284202-3	OC_TB_060221	Total/NA	Water	8260B	
MB 570-155395/8	Method Blank	Total/NA	Water	8260B	
LCS 570-155395/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-155395/5	Lab Control Sample Dup	Total/NA	Water	8260B	

### Analysis Batch: 155998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-284202-2	OC_SP210_INF_060221	Total/NA	Water	8260B	
MB 570-155998/8	Method Blank	Total/NA	Water	8260B	
LCS 570-155998/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-155998/5	Lab Control Sample Dup	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 155680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-284202-1	OC_SP220B_EFF_060221	Total/NA	Water	3510C	
MB 570-155680/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-155680/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-155680/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
440-284202-1 MS	OC_SP220B_EFF_060221	Total/NA	Water	3510C	
440-284202-1 MSD	OC_SP220B_EFF_060221	Total/NA	Water	3510C	

### Analysis Batch: 156222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-284202-1	OC_SP220B_EFF_060221	Total/NA	Water	8270C SIM ID	155680
MB 570-155680/1-A	Method Blank	Total/NA	Water	8270C SIM ID	155680
LCS 570-155680/2-A	Lab Control Sample	Total/NA	Water	8270C SIM ID	155680
LCSD 570-155680/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM ID	155680
440-284202-1 MS	OC_SP220B_EFF_060221	Total/NA	Water	8270C SIM ID	155680
440-284202-1 MSD	OC_SP220B_EFF_060221	Total/NA	Water	8270C SIM ID	155680

# Definitions/Glossary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
SDG: Omega Chemical

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
D	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

## Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
SDG: Omega Chemical

### Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0161	11-19-21
California	Los Angeles County Sanitation Districts	10109	09-30-21
California	SCAQMD LAP	17LA0919	11-30-21
California	State	2944	09-30-21
Guam	State	20-003R	10-31-20 *
Nevada	State	CA00111	07-31-21
Oregon	NELAP	CA300001	01-30-22
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-21

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

**TestAmerica Irvine**

17461 Derian Ave

Suite 100

Irvine, CA 92614

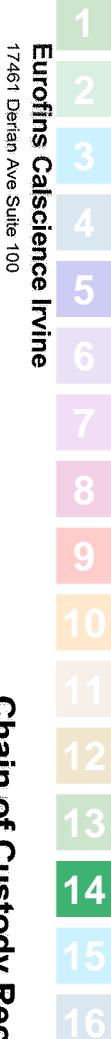
phone 949.261.1022 fax

**Chain of Custody Record**



THE LEADER IN ENVIRONMENTAL TESTING  
TestAmerica Laboratories, Inc.

Client Contact		Regulatory Program:		<input type="checkbox"/> DW	<input type="checkbox"/> NPDES	<input checked="" type="checkbox"/> RCRA	<input type="checkbox"/> Other	Site Contact: Khalid Azhar	Date: 6/2/2021	COC No:	1 of 1 COCs
De Maximis	Jaime Dinello	Project Manager	Trent Henderson	Lab Contact:	Danielle Roberts	Carrier:				Sampler	
1322 Scott St.	Suite 104	Tell/Fax:	(949) 453-1047 / (949) 453-1047							For Lab Use Only	
San Diego, CA 92106	(563) 756-8149	Analysis Turnaround Time								Walk-in Client:	
		CALENDAR DAYS	WORKING DAYS							Lab Sampling:	
		TAT if different from Below	STD:							Job / SDG No.:	
		<input checked="" type="checkbox"/>	2 weeks								
		<input type="checkbox"/>	1 week								
		<input type="checkbox"/>	2 days								
		<input type="checkbox"/>	1 day								
Sample Specific Notes:											
Sample Identification		Sample Date	Sample Time	Sample Type (Cr/Comp, Gas/Grav)	Matrix	# of Cont.					
OC_SP220B_EFF_060221	6/2/2021	12:00	Grab	GW	5	x	x				
OC_SP210_INF_060221	6/2/2021	11:05	Grab	GW	3	x					
OC_TB_060221	6/2/2021	11:55	H2O	H2O	2	x					
Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other											
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.											
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison A <input type="checkbox"/> Unknown											
Special Instructions/QC Requirements & Comments:											
Custody Seals Intact:		<input type="checkbox"/> Yes	<input type="checkbox"/> No	Custody Seal No.	Cooler Temp. (°C)		Obs ID:	Corrd:	Therm ID No.:		
Relinquished by:				Company: TIA	Date/Time: 6/4/21	Received by:	Company: EC TIA	Date/Time: 6/4/21 11:50	Date/Time: 6/4/21 11:50		
Relinquished by:				Company: EC TIA	Date/Time: 6/4/21	Received by:	Company: EC	Date/Time: 6/4/21 1545	Date/Time: 6/4/21 1545		
6/4/21 12:12 1K 89											



## Chain of Custody Record



eurofins

Environment Testing  
America

17461 Derian Ave Suite 100

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Note: Since laboratory accreditations are subject to change, Eurofins Caliscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/testmatrix being analyzed the samples must be shipped back to the Eurofins Caliscience laboratory or other institutions will be provided. Any changes to accreditation status should be brought to Eurofins Caliscience immediately. If all requested accreditations are current in date, return the signed Chain-of-Custody attached in said communication in Europe. [www.eurofinscaliscience.com](http://www.eurofinscaliscience.com)

**Possible Hazard Identification** \_\_\_\_\_  
**Sample Disposal** (A fee may be assessed if samples are retained longer than 1 month) \_\_\_\_\_  
In the event of an emergency, contact your supervisor or the Environmental Health and Safety Office at 609-258-4626 or 609-258-4627 or University Police at 609-258-3636.

Return To Client     Disposal By Lab     Archive For \_\_\_\_\_ Months

Deliverable Requested	I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
-----------------------	---------------------------------	-----------------------------	---------------------------------------

Empty Kit Relinquished by:	Date/Time:	Date	Time	Method of Shipment:
Relinquished by:				

RECEIVED BY  
RECORDED BY  
DATE REC'D  
6/1/21 1120  
COMPANY

Reimbursement by	
Date/Time:	

Renlinquished by:		Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seal Intact: △ Yes △ No	Custody Seal No.: <i>N/A</i>					Cooler Temperature(s) °C and Other Remarks: <i>2.5 / 2.9 SCW</i>

## Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-284202-1  
SDG Number: Omega Chemical

**Login Number: 284202**

**List Source: Eurofins Calscience Irvine**

**List Number: 1**

**Creator: Escalante, Maria I**

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True		
The cooler's custody seal, if present, is intact.	N/A	Not present	
Sample custody seals, if present, are intact.	N/A	Not Present	
The cooler or samples do not appear to have been compromised or tampered with.	True		
Samples were received on ice.	True		
Cooler Temperature is acceptable.	True		
Cooler Temperature is recorded.	True		
COC is present.	True		
COC is filled out in ink and legible.	True		
COC is filled out with all pertinent information.	True		
Is the Field Sampler's name present on COC?	True		
There are no discrepancies between the containers received and the COC.	True		
Samples are received within Holding Time (excluding tests with immediate HTs)	True		
Sample containers have legible labels.	True		
Containers are not broken or leaking.	True		
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	N/A		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		
Residual Chlorine Checked.	N/A		

## Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-284202-1

SDG Number: Omega Chemical

**Login Number:** 284202

**List Source:** Eurofins Calscience LLC

**List Number:** 2

**List Creation:** 06/05/21 01:37 PM

**Creator:** Ortiz-Luis, Michael

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A		1
The cooler's custody seal, if present, is intact.	N/A		2
Sample custody seals, if present, are intact.	N/A		3
The cooler or samples do not appear to have been compromised or tampered with.	True		4
Samples were received on ice.	True		5
Cooler Temperature is acceptable.	True		6
Cooler Temperature is recorded.	True	2.9	7
COC is present.	True		8
COC is filled out in ink and legible.	True		9
COC is filled out with all pertinent information.	True		10
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.	11
There are no discrepancies between the containers received and the COC.	True		12
Samples are received within Holding Time (excluding tests with immediate HTs)	True		13
Sample containers have legible labels.	True		14
Containers are not broken or leaking.	True		15
Sample collection date/times are provided.	True		16
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	True		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		
Residual Chlorine Checked.	N/A		

# Isotope Dilution Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical GWCS Monthly

Job ID: 440-284202-1  
SDG: Omega Chemical

## Method: 8270C SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	DXE (15-150)	Percent Isotope Dilution Recovery (Acceptance Limits)					
			15	16	17	18	19	20
440-284202-1	OC_SP220B_EFF_060221	28						
440-284202-1 MS	OC_SP220B_EFF_060221	26						
440-284202-1 MSD	OC_SP220B_EFF_060221	28						
LCS 570-155680/2-A	Lab Control Sample	33						
LCSD 570-155680/3-A	Lab Control Sample Dup	30						
MB 570-155680/1-A	Method Blank	39						

### Surrogate Legend

DXE = 1,4-Dioxane-d8



Environment Testing  
America



## ANALYTICAL REPORT

Eurofins Calscience Irvine  
17461 Derian Ave  
Suite 100  
Irvine, CA 92614-5817  
Tel: (949)261-1022

Laboratory Job ID: 440-282833-1

Laboratory Sample Delivery Group: Whittier, CA  
Client Project/Site: Omega Chemical Wastewater

**For:**

Jacob & Hefner Associates P.C.  
15375 Barranca Parkway, J-101  
Irvine, California 92618

Attn: Trent Henderson

Danielle Roberts

Authorized for release by:  
5/20/2021 2:03:46 PM

Danielle Roberts, Senior Project Manager  
(949)260-3249  
[Danielle.Roberts@Eurofinset.com](mailto:Danielle.Roberts@Eurofinset.com)

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Sample Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID	
440-282833-1	Composite	Water	05/06/21 07:00	05/06/21 12:45		1
440-282833-2	Grab	Water	05/06/21 07:05	05/06/21 12:45		2
						3
						4
						5
						6
						7
						8
						9
						10
						11
						12
						13
						14
						15

# Case Narrative

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## Job ID: 440-282833-1

### Laboratory: Eurofins Calscience Irvine

#### Narrative

#### Job Narrative 440-282833-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 5/6/2021 12:45 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.8° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method 8270C: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 440-646376 and analytical batch 440-646607 recovered outside control limits for the following analytes: 2,4-Dinitrotoluene and 2-Nitroaniline. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8270C: The continuing calibration verification (CCV) associated with batch 440-646607 recovered above the upper control limit for N-Nitrosodi-n-propylamine. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Field Service / Mobile Lab

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

Method 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-646203. A laboratory control sample duplicate (LCSD) was extracted to provide precision data.

Methods 3520C, 8270: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-646376.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## Client Sample ID: Composite

## Lab Sample ID: 440-282833-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	6.0		1.0	mg/L	1		SM 2540D	Total/NA
Chemical Oxygen Demand	310		20	mg/L	1		SM 5220D	Total/NA

## Client Sample ID: Grab

## Lab Sample ID: 440-282833-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	8.4		0.48	ug/L	1		8270C SIM	Total/NA
pH	8.3	HF	0.1	SU	1		SM 4500 H+ B	Total/NA
Field pH	8.29			SU	1		Field Sampling	Total/NA
Field Temperature	17.40			Celsius	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## Client Sample ID: Composite

Date Collected: 05/06/21 07:00  
Date Received: 05/06/21 12:45

## Lab Sample ID: 440-282833-1

Matrix: Water

### General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	6.0		1.0	mg/L			05/10/21 10:18	1
Chemical Oxygen Demand	310		20	mg/L			05/14/21 14:38	1

## Client Sample ID: Grab

Date Collected: 05/06/21 07:05  
Date Received: 05/06/21 12:45

## Lab Sample ID: 440-282833-2

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			05/12/21 21:49	1
1,1,1-Trichloroethane	ND		1.0	ug/L			05/12/21 21:49	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			05/12/21 21:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			05/12/21 21:49	1
Acrolein	ND		5.0	ug/L			05/12/21 23:09	1
1,1,2-Trichloroethane	ND		1.0	ug/L			05/12/21 21:49	1
Acrylonitrile	ND		2.0	ug/L			05/12/21 23:09	1
1,1-Dichloroethane	ND		1.0	ug/L			05/12/21 21:49	1
1,1-Dichloroethene	ND		1.0	ug/L			05/12/21 21:49	1
1,1-Dichloropropene	ND		1.0	ug/L			05/12/21 21:49	1
Total Volatile Organic Compounds	ND		150	ug/L			05/12/21 23:09	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			05/12/21 21:49	1
1,2,3-Trichloropropane	ND		1.0	ug/L			05/12/21 21:49	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			05/12/21 21:49	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			05/12/21 21:49	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			05/12/21 21:49	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			05/12/21 21:49	1
1,2-Dichlorobenzene	ND		1.0	ug/L			05/12/21 21:49	1
1,2-Dichloroethane	ND		1.0	ug/L			05/12/21 21:49	1
1,2-Dichloropropane	ND		1.0	ug/L			05/12/21 21:49	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			05/12/21 21:49	1
1,3-Dichlorobenzene	ND		1.0	ug/L			05/12/21 21:49	1
1,3-Dichloropropane	ND		1.0	ug/L			05/12/21 21:49	1
1,4-Dichlorobenzene	ND		1.0	ug/L			05/12/21 21:49	1
2,2-Dichloropropane	ND		1.0	ug/L			05/12/21 21:49	1
2-Chlorotoluene	ND		1.0	ug/L			05/12/21 21:49	1
4-Chlorotoluene	ND		1.0	ug/L			05/12/21 21:49	1
Acetone	ND		10	ug/L			05/12/21 21:49	1
Benzene	ND		0.50	ug/L			05/12/21 21:49	1
Bromobenzene	ND		1.0	ug/L			05/12/21 21:49	1
Bromochloromethane	ND		1.0	ug/L			05/12/21 21:49	1
Bromodichloromethane	ND		1.0	ug/L			05/12/21 21:49	1
Bromoform	ND		1.0	ug/L			05/12/21 21:49	1
Bromomethane	ND		1.0	ug/L			05/12/21 21:49	1
Carbon tetrachloride	ND		0.50	ug/L			05/12/21 21:49	1
Chlorobenzene	ND		1.0	ug/L			05/12/21 21:49	1
Chloroethane	ND		1.0	ug/L			05/12/21 21:49	1
Chloroform	ND		1.0	ug/L			05/12/21 21:49	1
Chloromethane	ND		1.0	ug/L			05/12/21 21:49	1
cis-1,2-Dichloroethene	ND		1.0	ug/L			05/12/21 21:49	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			05/12/21 21:49	1

# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Client Sample ID: Grab

Date Collected: 05/06/21 07:05  
 Date Received: 05/06/21 12:45

## Lab Sample ID: 440-282833-2

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		1.0	ug/L		05/12/21 21:49		1
Dibromomethane	ND		1.0	ug/L		05/12/21 21:49		1
Dichlorodifluoromethane	ND		1.0	ug/L		05/12/21 21:49		1
Ethylbenzene	ND		1.0	ug/L		05/12/21 21:49		1
Hexachlorobutadiene	ND		1.0	ug/L		05/12/21 21:49		1
Isopropyl alcohol	ND		250	ug/L		05/12/21 21:49		1
Isopropylbenzene	ND		1.0	ug/L		05/12/21 21:49		1
m,p-Xylene	ND		1.0	ug/L		05/12/21 21:49		1
Methylene Chloride	ND		5.0	ug/L		05/12/21 21:49		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		05/12/21 21:49		1
Naphthalene	ND		1.0	ug/L		05/12/21 21:49		1
n-Butylbenzene	ND		1.0	ug/L		05/12/21 21:49		1
N-Propylbenzene	ND		1.0	ug/L		05/12/21 21:49		1
o-Xylene	ND		1.0	ug/L		05/12/21 21:49		1
p-Isopropyltoluene	ND		1.0	ug/L		05/12/21 21:49		1
sec-Butylbenzene	ND		1.0	ug/L		05/12/21 21:49		1
Styrene	ND		1.0	ug/L		05/12/21 21:49		1
tert-Butylbenzene	ND		1.0	ug/L		05/12/21 21:49		1
Tetrachloroethene	ND		1.0	ug/L		05/12/21 21:49		1
Toluene	ND		1.0	ug/L		05/12/21 21:49		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		05/12/21 21:49		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		05/12/21 21:49		1
Trichloroethene	ND		1.0	ug/L		05/12/21 21:49		1
Trichlorofluoromethane	ND		1.0	ug/L		05/12/21 21:49		1
Vinyl chloride	ND		0.50	ug/L		05/12/21 21:49		1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		05/12/21 23:09	1
4-Bromofluorobenzene (Surr)	103		80 - 120		05/12/21 23:09	1
Dibromofluoromethane (Surr)	98		76 - 132		05/12/21 23:09	1
Toluene-d8 (Surr)	104		80 - 128		05/12/21 23:09	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		05/12/21 21:49	1
4-Bromofluorobenzene (Surr)	100		80 - 120		05/12/21 21:49	1
Dibromofluoromethane (Surr)	100		76 - 132		05/12/21 21:49	1
Toluene-d8 (Surr)	105		80 - 128		05/12/21 21:49	1

### Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloroethyl vinyl ether	ND		2.0	ug/L		05/12/21 23:36		1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130		05/12/21 23:36	1
4-Bromofluorobenzene (Surr)	101		80 - 120		05/12/21 23:36	1
Dibromofluoromethane (Surr)	98		76 - 132		05/12/21 23:36	1
Toluene-d8 (Surr)	101		80 - 128		05/12/21 23:36	1

### Method: 8270C SIM - 1,4 Dioxane by SIM

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	8.4		0.48	ug/L		05/10/21 15:25	05/14/21 16:35	1

Eurofins Calscience Irvine

# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Client Sample ID: Grab

Date Collected: 05/06/21 07:05  
 Date Received: 05/06/21 12:45

## Lab Sample ID: 440-282833-2

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	55		27 - 120	05/10/21 15:25	05/14/21 16:35	1

### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
1,2-Dichlorobenzene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
1,2-Diphenylhydrazine(as Azobenzene)	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
1,3-Dichlorobenzene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
1,4-Dichlorobenzene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2,4,5-Trichlorophenol	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
2,4,6-Trichlorophenol	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
2,4-Dichlorophenol	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2,4-Dimethylphenol	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
2,4-Dinitrophenol	ND		39	ug/L	05/11/21 16:54	05/13/21 20:17		1
2,4-Dinitrotoluene	ND *+		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2,6-Dinitrotoluene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2-Chloronaphthalene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2-Chlorophenol	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2-Methylnaphthalene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2-Methylphenol	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2-Nitroaniline	ND *+		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
2-Nitrophenol	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
3,3'-Dichlorobenzidine	ND		39	ug/L	05/11/21 16:54	05/13/21 20:17		1
3-Methylphenol + 4-Methylphenol	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
3-Nitroaniline	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
4,6-Dinitro-2-methylphenol	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
4-Bromophenyl phenyl ether	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
4-Chloro-3-methylphenol	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
4-Chloroaniline	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
4-Chlorophenyl phenyl ether	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
4-Nitroaniline	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
4-Nitrophenol	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
Acenaphthene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Acenaphthylene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Aniline	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Anthracene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzidine	ND		39	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzo[a]anthracene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzo[a]pyrene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzo[b]fluoranthene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzo[g,h,i]perylene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzo[k]fluoranthene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzoic acid	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzyl alcohol	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
bis (2-chloroisopropyl) ether	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Bis(2-chloroethoxy)methane	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Bis(2-chloroethyl)ether	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Bis(2-ethylhexyl) phthalate	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
Butyl benzyl phthalate	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1

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# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Client Sample ID: Grab

Date Collected: 05/06/21 07:05  
 Date Received: 05/06/21 12:45

## Lab Sample ID: 440-282833-2

Matrix: Water

### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Dibenz(a,h)anthracene	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
Dibenzofuran	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Diethyl phthalate	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Dimethyl phthalate	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Di-n-butyl phthalate	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
Di-n-octyl phthalate	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
Fluoranthene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Fluorene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Hexachlorobenzene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Hexachlorobutadiene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Hexachlorocyclopentadiene	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
Hexachloroethane	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Indeno[1,2,3-cd]pyrene	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
Isophorone	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Naphthalene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Nitrobenzene	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
N-Nitrosodimethylamine	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
N-Nitrosodi-n-propylamine	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
N-Nitrosodiphenylamine	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Pentachlorophenol	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
Phenanthrene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Phenol	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Pyrene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	87		40 - 120	05/11/21 16:54	05/13/21 20:17	1
2-Fluorobiphenyl	91		50 - 120	05/11/21 16:54	05/13/21 20:17	1
2-Fluorophenol (Surr)	77		30 - 120	05/11/21 16:54	05/13/21 20:17	1
Nitrobenzene-d5 (Surr)	94		45 - 120	05/11/21 16:54	05/13/21 20:17	1
Phenol-d6 (Surr)	86		35 - 120	05/11/21 16:54	05/13/21 20:17	1
Terphenyl-d14 (Surr)	86		10 - 150	05/11/21 16:54	05/13/21 20:17	1

### General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.3	HF	0.1	SU			05/07/21 10:26	1

### General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Dissolved	ND	HF	0.050	mg/L		05/07/21 16:10	05/07/21 17:02	1

### Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	8.29			SU			05/06/21 07:05	1
Field Temperature	17.40			Celsius			05/06/21 07:05	1

# Surrogate Summary

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-130)	BFB (80-120)	DBFM (76-132)	TOL (80-128)
440-282833-2 - RA	Grab	102	101	98	101
440-282833-2	Grab	101	100	100	105
440-282833-2	Grab	100	103	98	104
440-282833-2 MS	Grab	97	101	99	101
440-282833-2 MSD	Grab	94	102	97	103
440-283076-B-1 MS	Matrix Spike	104	100	99	98
440-283076-B-1 MSD	Matrix Spike Duplicate	99	98	99	100
LCS 440-646503/1002	Lab Control Sample	96	97	98	96
LCS 440-646505/1002	Lab Control Sample	95	103	96	99
LCS 440-646505/1003	Lab Control Sample	101	102	99	104
MB 440-646503/4	Method Blank	100	101	101	102
MB 440-646505/4	Method Blank	106	101	101	100

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (40-120)	FBD (50-120)	2FP (30-120)	NBZ (45-120)	PHL6 (35-120)	TPHL (10-150)
440-282833-2	Grab	87	91	77	94	86	86
LCS 440-646376/2-A	Lab Control Sample	99	91	85	98	95	95
LCSD 440-646376/3-A	Lab Control Sample Dup	102	92	85	98	95	94
MB 440-646376/1-A	Method Blank	84	92	75	92	84	91

### Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBD = 2-Fluorobiphenyl

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL6 = Phenol-d6 (Surr)

TPHL = Terphenyl-d14 (Surr)

## Method: 8270C SIM - 1,4 Dioxane by SIM

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DXE (27-120)			
440-282833-2	Grab	55			
LCS 440-646203/3-A	Lab Control Sample	60			
LCSD 440-646203/4-A	Lab Control Sample Dup	46			
MB 440-646203/1-A	Method Blank	50			

### Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

## Method Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	1,4 Dioxane by SIM	SW846	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
SM 4500 H+ B	pH	SM	TAL IRV
SM 4500 S2 D	Sulfide, Total	SM	TAL IRV
SM 5220D	COD	SM	TAL IRV
Field Sampling	Field Sampling	EPA	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV
SM 4500 S2 B	Sulfide, Separation of Soluble and Insoluble	SM	TAL IRV

### Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

# Lab Chronicle

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Client Sample ID: Composite

Date Collected: 05/06/21 07:00

Date Received: 05/06/21 12:45

## Lab Sample ID: 440-282833-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	646155	05/10/21 10:18	VY3D	TAL IRV
Total/NA	Analysis	SM 5220D		1	2 mL	2 mL	646749	05/14/21 14:38	PN8W	TAL IRV

## Client Sample ID: Grab

Date Collected: 05/06/21 07:05

Date Received: 05/06/21 12:45

## Lab Sample ID: 440-282833-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	646505	05/12/21 21:49	K6MO	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	646505	05/12/21 23:09	K6MO	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	646503	05/12/21 23:36	K6MO	TAL IRV
Total/NA	Prep	3520C			1035 mL	2 mL	646376	05/11/21 16:54	AR4F	TAL IRV
Total/NA	Analysis	8270C		1			646607	05/13/21 20:17	AR4F	TAL IRV
Total/NA	Prep	3520C			1035 mL	1 mL	646203	05/10/21 15:25	AR4F	TAL IRV
Total/NA	Analysis	8270C SIM		1			646743	05/14/21 16:35	AR4F	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1			646099	05/07/21 10:26	YO8L	TAL IRV
Dissolved	Prep	SM 4500 S2 B			7.5 mL	7.5 mL	646056	05/07/21 16:10	GG0B	TAL IRV
Dissolved	Analysis	SM 4500 S2 D		1			646062	05/07/21 17:02	GG0B	TAL IRV
Total/NA	Analysis	Field Sampling		1			646219	05/06/21 07:05	P1R	TAL IRV

### Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID:** MB 440-646503/4

**Matrix:** Water

**Analysis Batch:** 646503

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloroethyl vinyl ether	ND		2.0	ug/L			05/12/21 21:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		05/12/21 21:02	1
4-Bromofluorobenzene (Surr)	101		80 - 120		05/12/21 21:02	1
Dibromofluoromethane (Surr)	101		76 - 132		05/12/21 21:02	1
Toluene-d8 (Surr)	102		80 - 128		05/12/21 21:02	1

**Lab Sample ID:** LCS 440-646503/1002

**Matrix:** Water

**Analysis Batch:** 646503

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limts
2-Chloroethyl vinyl ether	25.0	25.1		ug/L		101	37 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		70 - 130
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	98		76 - 132
Toluene-d8 (Surr)	96		80 - 128

**Lab Sample ID:** 440-283076-B-1 MS

**Matrix:** Water

**Analysis Batch:** 646503

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limts
2-Chloroethyl vinyl ether	ND		10.0	10.1		ug/L		101	10 - 140

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		70 - 130
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132
Toluene-d8 (Surr)	98		80 - 128

**Lab Sample ID:** 440-283076-B-1 MSD

**Matrix:** Water

**Analysis Batch:** 646503

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limts	RPD
2-Chloroethyl vinyl ether	ND		10.0	10.3		ug/L		103	10 - 140	1

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132
Toluene-d8 (Surr)	100		80 - 128

**Client Sample ID:** Matrix Spike Duplicate  
**Prep Type:** Total/NA

Eurofins Calscience Irvine

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-646505/4**

**Matrix: Water**

**Analysis Batch: 646505**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			05/12/21 21:22	1
1,1,1-Trichloroethane	ND		1.0	ug/L			05/12/21 21:22	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			05/12/21 21:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			05/12/21 21:22	1
Acrolein	ND		5.0	ug/L			05/12/21 21:22	1
1,1,2-Trichloroethane	ND		1.0	ug/L			05/12/21 21:22	1
Acrylonitrile	ND		2.0	ug/L			05/12/21 21:22	1
1,1-Dichloroethane	ND		1.0	ug/L			05/12/21 21:22	1
1,1-Dichloroethene	ND		1.0	ug/L			05/12/21 21:22	1
1,1-Dichloropropene	ND		1.0	ug/L			05/12/21 21:22	1
Total Volatile Organic Compounds	ND		150	ug/L			05/12/21 21:22	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			05/12/21 21:22	1
1,2,3-Trichloropropane	ND		1.0	ug/L			05/12/21 21:22	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			05/12/21 21:22	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			05/12/21 21:22	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			05/12/21 21:22	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			05/12/21 21:22	1
1,2-Dichlorobenzene	ND		1.0	ug/L			05/12/21 21:22	1
1,2-Dichloroethane	ND		1.0	ug/L			05/12/21 21:22	1
1,2-Dichloropropane	ND		1.0	ug/L			05/12/21 21:22	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			05/12/21 21:22	1
1,3-Dichlorobenzene	ND		1.0	ug/L			05/12/21 21:22	1
1,3-Dichloropropane	ND		1.0	ug/L			05/12/21 21:22	1
1,4-Dichlorobenzene	ND		1.0	ug/L			05/12/21 21:22	1
2,2-Dichloropropane	ND		1.0	ug/L			05/12/21 21:22	1
2-Chlorotoluene	ND		1.0	ug/L			05/12/21 21:22	1
4-Chlorotoluene	ND		1.0	ug/L			05/12/21 21:22	1
Acetone	ND		10	ug/L			05/12/21 21:22	1
Benzene	ND		0.50	ug/L			05/12/21 21:22	1
Bromobenzene	ND		1.0	ug/L			05/12/21 21:22	1
Bromochloromethane	ND		1.0	ug/L			05/12/21 21:22	1
Bromodichloromethane	ND		1.0	ug/L			05/12/21 21:22	1
Bromoform	ND		1.0	ug/L			05/12/21 21:22	1
Bromomethane	ND		1.0	ug/L			05/12/21 21:22	1
Carbon tetrachloride	ND		0.50	ug/L			05/12/21 21:22	1
Chlorobenzene	ND		1.0	ug/L			05/12/21 21:22	1
Chloroethane	ND		1.0	ug/L			05/12/21 21:22	1
Chloroform	ND		1.0	ug/L			05/12/21 21:22	1
Chloromethane	ND		1.0	ug/L			05/12/21 21:22	1
cis-1,2-Dichloroethene	ND		1.0	ug/L			05/12/21 21:22	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			05/12/21 21:22	1
Dibromochloromethane	ND		1.0	ug/L			05/12/21 21:22	1
Dibromomethane	ND		1.0	ug/L			05/12/21 21:22	1
Dichlorodifluoromethane	ND		1.0	ug/L			05/12/21 21:22	1
Ethylbenzene	ND		1.0	ug/L			05/12/21 21:22	1
Hexachlorobutadiene	ND		1.0	ug/L			05/12/21 21:22	1
Isopropyl alcohol	ND		250	ug/L			05/12/21 21:22	1
Isopropylbenzene	ND		1.0	ug/L			05/12/21 21:22	1

Eurofins Calscience Irvine

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-646505/4**

**Matrix: Water**

**Analysis Batch: 646505**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	ND		1.0	ug/L		05/12/21 21:22		1
Methylene Chloride	ND		5.0	ug/L		05/12/21 21:22		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		05/12/21 21:22		1
Naphthalene	ND		1.0	ug/L		05/12/21 21:22		1
n-Butylbenzene	ND		1.0	ug/L		05/12/21 21:22		1
N-Propylbenzene	ND		1.0	ug/L		05/12/21 21:22		1
o-Xylene	ND		1.0	ug/L		05/12/21 21:22		1
p-Isopropyltoluene	ND		1.0	ug/L		05/12/21 21:22		1
sec-Butylbenzene	ND		1.0	ug/L		05/12/21 21:22		1
Styrene	ND		1.0	ug/L		05/12/21 21:22		1
tert-Butylbenzene	ND		1.0	ug/L		05/12/21 21:22		1
Tetrachloroethene	ND		1.0	ug/L		05/12/21 21:22		1
Toluene	ND		1.0	ug/L		05/12/21 21:22		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		05/12/21 21:22		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		05/12/21 21:22		1
Trichloroethene	ND		1.0	ug/L		05/12/21 21:22		1
Trichlorofluoromethane	ND		1.0	ug/L		05/12/21 21:22		1
Vinyl chloride	ND		0.50	ug/L		05/12/21 21:22		1

**MB MB**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 130		05/12/21 21:22	1
4-Bromofluorobenzene (Surr)	101		80 - 120		05/12/21 21:22	1
Dibromofluoromethane (Surr)	101		76 - 132		05/12/21 21:22	1
Toluene-d8 (Surr)	100		80 - 128		05/12/21 21:22	1

**Lab Sample ID: LCS 440-646505/1002**

**Matrix: Water**

**Analysis Batch: 646505**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
1,1,1,2-Tetrachloroethane	25.0	24.5		ug/L		98	60 - 141
1,1,1-Trichloroethane	25.0	25.4		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.3		ug/L		101	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	26.4		ug/L		105	60 - 140
Acrolein	24.7	23.9		ug/L		97	10 - 145
1,1,2-Trichloroethane	25.0	24.4		ug/L		98	70 - 130
Acrylonitrile	250	239		ug/L		95	48 - 140
1,1-Dichloroethane	25.0	25.0		ug/L		100	64 - 130
1,1-Dichloroethene	25.0	25.6		ug/L		103	70 - 130
1,1-Dichloropropene	25.0	26.0		ug/L		104	70 - 130
Total Volatile Organic Compounds	5370	5300		ug/L		99	
1,2,3-Trichlorobenzene	25.0	22.3		ug/L		89	60 - 140
1,2,3-Trichloropropane	25.0	26.6		ug/L		107	63 - 130
1,2,4-Trichlorobenzene	25.0	23.0		ug/L		92	60 - 140
1,2,4-Trimethylbenzene	25.0	26.7		ug/L		107	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	23.6		ug/L		94	52 - 140
1,2-Dibromoethane (EDB)	25.0	24.5		ug/L		98	70 - 130
1,2-Dichlorobenzene	25.0	24.6		ug/L		98	70 - 130

Eurofins Calscience Irvine

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-646505/1002**

**Matrix: Water**

**Analysis Batch: 646505**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	25.0	23.4		ug/L	94	57 - 138	
1,2-Dichloropropane	25.0	24.1		ug/L	96	67 - 130	
1,3,5-Trimethylbenzene	25.0	26.9		ug/L	108	70 - 136	
1,3-Dichlorobenzene	25.0	25.8		ug/L	103	70 - 130	
1,3-Dichloropropane	25.0	24.3		ug/L	97	70 - 130	
1,4-Dichlorobenzene	25.0	25.0		ug/L	100	70 - 130	
2,2-Dichloropropane	25.0	27.4		ug/L	109	68 - 141	
2-Chlorotoluene	25.0	26.3		ug/L	105	70 - 130	
4-Chlorotoluene	25.0	26.2		ug/L	105	70 - 130	
Acetone	125	120		ug/L	96	10 - 150	
Benzene	25.0	24.7		ug/L	99	68 - 130	
Bromobenzene	25.0	25.8		ug/L	103	70 - 130	
Bromochloromethane	25.0	25.6		ug/L	102	70 - 130	
Bromodichloromethane	25.0	25.1		ug/L	101	70 - 132	
Bromoform	25.0	26.6		ug/L	106	60 - 148	
Bromomethane	25.0	25.1		ug/L	100	64 - 139	
Carbon tetrachloride	25.0	26.2		ug/L	105	60 - 150	
Chlorobenzene	25.0	24.2		ug/L	97	70 - 130	
Chloroethane	25.0	24.9		ug/L	100	64 - 135	
Chloroform	25.0	23.7		ug/L	95	70 - 130	
Chloromethane	25.0	24.8		ug/L	99	47 - 140	
cis-1,2-Dichloroethene	25.0	25.0		ug/L	100	70 - 133	
cis-1,3-Dichloropropene	25.0	25.6		ug/L	102	70 - 133	
Dibromochloromethane	25.0	25.1		ug/L	100	69 - 145	
Dibromomethane	25.0	25.1		ug/L	100	70 - 130	
Dichlorodifluoromethane	25.0	28.0		ug/L	112	29 - 150	
Ethylbenzene	25.0	25.0		ug/L	100	70 - 130	
Hexachlorobutadiene	25.0	24.2		ug/L	97	10 - 150	
Isopropylbenzene	25.0	25.7		ug/L	103	70 - 136	
m,p-Xylene	25.0	25.4		ug/L	101	70 - 130	
Methylene Chloride	25.0	23.9		ug/L	95	52 - 130	
Methyl-t-Butyl Ether (MTBE)	25.0	24.5		ug/L	98	63 - 131	
Naphthalene	25.0	21.8		ug/L	87	60 - 140	
n-Butylbenzene	25.0	27.9		ug/L	112	65 - 150	
N-Propylbenzene	25.0	27.3		ug/L	109	67 - 139	
o-Xylene	25.0	25.3		ug/L	101	70 - 130	
p-Isopropyltoluene	25.0	27.2		ug/L	109	70 - 132	
sec-Butylbenzene	25.0	27.4		ug/L	110	70 - 138	
Styrene	25.0	25.0		ug/L	100	70 - 134	
tert-Butylbenzene	25.0	26.9		ug/L	108	70 - 130	
Tetrachloroethene	25.0	25.0		ug/L	100	70 - 130	
Toluene	25.0	24.2		ug/L	97	70 - 130	
trans-1,2-Dichloroethene	25.0	25.5		ug/L	102	70 - 130	
trans-1,3-Dichloropropene	25.0	25.9		ug/L	104	70 - 132	
Trichloroethene	25.0	24.6		ug/L	98	70 - 130	
Trichlorofluoromethane	25.0	27.1		ug/L	109	60 - 150	
Vinyl chloride	25.0	26.9		ug/L	108	59 - 133	

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-646505/1002**

**Matrix: Water**

**Analysis Batch: 646505**

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95				70 - 130
4-Bromofluorobenzene (Surr)	103				80 - 120
Dibromofluoromethane (Surr)	96				76 - 132
Toluene-d8 (Surr)	99				80 - 128

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

**Lab Sample ID: LCS 440-646505/1003**

**Matrix: Water**

**Analysis Batch: 646505**

Analyte	Spike	LCS	LCS	%Rec.			
	Added	Result	Qualifier	Unit	D	%Rec	Limits
Total Volatile Organic Compounds	1630	1730		ug/L		106	
Isopropyl alcohol	250	276		ug/L		111	49 - 142

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101				70 - 130
4-Bromofluorobenzene (Surr)	102				80 - 120
Dibromofluoromethane (Surr)	99				76 - 132
Toluene-d8 (Surr)	104				80 - 128

**Lab Sample ID: 440-282833-2 MS**

**Matrix: Water**

**Analysis Batch: 646505**

Analyte	Sample	Sample	Spike	MS		%Rec.			
	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	ND		10.0	9.61		ug/L		96	60 - 149
1,1,1-Trichloroethane	ND		10.0	10.0		ug/L		100	70 - 130
1,1,2,2-Tetrachloroethane	ND		10.0	10.6		ug/L		106	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	11.3		ug/L		113	60 - 140
Acrolein	ND		9.88	6.68		ug/L		68	10 - 147
1,1,2-Trichloroethane	ND		10.0	9.71		ug/L		97	70 - 130
Acrylonitrile	ND		100	96.0		ug/L		96	38 - 144
1,1-Dichloroethane	ND		10.0	9.60		ug/L		96	65 - 130
1,1-Dichloroethene	ND		10.0	10.6		ug/L		106	70 - 130
1,1-Dichloropropene	ND		10.0	10.6		ug/L		106	64 - 130
Total Volatile Organic Compounds	ND		3770	3700		ug/L		98	
1,2,3-Trichlorobenzene	ND		10.0	9.58		ug/L		96	60 - 140
1,2,3-Trichloropropane	ND		10.0	11.0		ug/L		110	60 - 130
1,2,4-Trichlorobenzene	ND		10.0	9.53		ug/L		95	60 - 140
1,2,4-Trimethylbenzene	ND		10.0	10.7		ug/L		107	70 - 130
1,2-Dibromo-3-Chloropropane	ND		10.0	10.8		ug/L		108	48 - 140
1,2-Dibromoethane (EDB)	ND		10.0	9.82		ug/L		98	70 - 131
1,2-Dichlorobenzene	ND		10.0	9.88		ug/L		99	70 - 130
1,2-Dichloroethane	ND		10.0	9.06		ug/L		91	56 - 146
1,2-Dichloropropane	ND		10.0	9.35		ug/L		94	69 - 130
1,3,5-Trimethylbenzene	ND		10.0	10.6		ug/L		106	70 - 130
1,3-Dichlorobenzene	ND		10.0	9.91		ug/L		99	70 - 130
1,3-Dichloropropane	ND		10.0	9.61		ug/L		96	70 - 130

**Client Sample ID: Grab**  
**Prep Type: Total/NA**

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-282833-2 MS**

**Matrix: Water**

**Analysis Batch: 646505**

**Client Sample ID: Grab**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,4-Dichlorobenzene	ND		10.0	9.82		ug/L	98	70 - 130	
2,2-Dichloropropane	ND		10.0	10.3		ug/L	103	69 - 138	
2-Chlorotoluene	ND		10.0	10.1		ug/L	101	70 - 130	
4-Chlorotoluene	ND		10.0	10.1		ug/L	101	70 - 130	
Acetone	ND		50.0	52.3		ug/L	105	10 - 150	
Benzene	ND		10.0	9.60		ug/L	96	66 - 130	
Bromobenzene	ND		10.0	9.83		ug/L	98	70 - 130	
Bromochloromethane	ND		10.0	9.65		ug/L	96	70 - 130	
Bromodichloromethane	ND		10.0	9.70		ug/L	97	70 - 138	
Bromoform	ND		10.0	10.7		ug/L	107	59 - 150	
Bromomethane	ND		10.0	10.1		ug/L	101	62 - 131	
Carbon tetrachloride	ND		10.0	10.6		ug/L	106	60 - 150	
Chlorobenzene	ND		10.0	9.72		ug/L	97	70 - 130	
Chloroethane	ND		10.0	11.5		ug/L	115	68 - 130	
Chloroform	ND		10.0	9.32		ug/L	93	70 - 130	
Chloromethane	ND		10.0	9.71		ug/L	97	39 - 144	
cis-1,2-Dichloroethene	ND		10.0	9.63		ug/L	96	70 - 130	
cis-1,3-Dichloropropene	ND		10.0	9.71		ug/L	97	70 - 133	
Dibromochloromethane	ND		10.0	9.88		ug/L	99	70 - 148	
Dibromomethane	ND		10.0	9.77		ug/L	98	70 - 130	
Dichlorodifluoromethane	ND		10.0	11.8		ug/L	118	25 - 142	
Ethylbenzene	ND		10.0	10.2		ug/L	102	70 - 130	
Hexachlorobutadiene	ND		10.0	10.1		ug/L	101	10 - 150	
Isopropyl alcohol	ND		250	254		ug/L	102	46 - 142	
Isopropylbenzene	ND		10.0	10.4		ug/L	104	70 - 132	
m,p-Xylene	ND		10.0	10.2		ug/L	102	70 - 133	
Methylene Chloride	ND		10.0	9.03		ug/L	90	52 - 130	
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.43		ug/L	94	70 - 130	
Naphthalene	ND		10.0	9.35		ug/L	93	60 - 140	
n-Butylbenzene	ND		10.0	11.0		ug/L	110	61 - 149	
N-Propylbenzene	ND		10.0	10.6		ug/L	106	66 - 135	
o-Xylene	ND		10.0	10.0		ug/L	100	70 - 133	
p-Isopropyltoluene	ND		10.0	10.8		ug/L	108	70 - 130	
sec-Butylbenzene	ND		10.0	10.8		ug/L	108	67 - 134	
Styrene	ND		10.0	9.52		ug/L	95	29 - 150	
tert-Butylbenzene	ND		10.0	10.8		ug/L	108	70 - 130	
Tetrachloroethene	ND		10.0	10.9		ug/L	109	70 - 137	
Toluene	ND		10.0	9.80		ug/L	98	70 - 130	
trans-1,2-Dichloroethene	ND		10.0	10.1		ug/L	101	70 - 130	
trans-1,3-Dichloropropene	ND		10.0	9.99		ug/L	100	70 - 138	
Trichloroethene	ND		10.0	9.99		ug/L	100	70 - 130	
Trichlorofluoromethane	ND		10.0	11.4		ug/L	114	60 - 150	
Vinyl chloride	ND		10.0	11.2		ug/L	112	50 - 137	

**MS**   **MS**

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-282833-2 MS**

**Matrix: Water**

**Analysis Batch: 646505**

**Client Sample ID: Grab**  
**Prep Type: Total/NA**

Surrogate	MS	MS
	%Recovery	Qualifier
Toluene-d8 (Surr)	101	80 - 128

**Lab Sample ID: 440-282833-2 MSD**

**Matrix: Water**

**Analysis Batch: 646505**

**Client Sample ID: Grab**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	Limit
1,1,1,2-Tetrachloroethane	ND		10.0	10.1		ug/L	101	60 - 149	5	20
1,1,1-Trichloroethane	ND		10.0	9.93		ug/L	99	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		10.0	11.3		ug/L	113	63 - 130	6	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	10.4		ug/L	104	60 - 140	9	20
Acrolein	ND		9.88	6.94		ug/L	70	10 - 147	4	40
1,1,2-Trichloroethane	ND		10.0	10.2		ug/L	102	70 - 130	5	25
Acrylonitrile	ND		100	98.8		ug/L	99	38 - 144	3	40
1,1-Dichloroethane	ND		10.0	9.56		ug/L	96	65 - 130	0	20
1,1-Dichloroethene	ND		10.0	10.1		ug/L	101	70 - 130	5	20
1,1-Dichloropropene	ND		10.0	10.2		ug/L	102	64 - 130	3	20
Total Volatile Organic Compounds	ND		3770	3970		ug/L	105		7	
1,2,3-Trichlorobenzene	ND		10.0	9.83		ug/L	98	60 - 140	3	20
1,2,3-Trichloropropane	ND		10.0	11.4		ug/L	114	60 - 130	4	30
1,2,4-Trichlorobenzene	ND		10.0	9.81		ug/L	98	60 - 140	3	20
1,2,4-Trimethylbenzene	ND		10.0	11.0		ug/L	110	70 - 130	3	25
1,2-Dibromo-3-Chloropropane	ND		10.0	10.9		ug/L	109	48 - 140	1	30
1,2-Dibromoethane (EDB)	ND		10.0	10.3		ug/L	103	70 - 131	5	25
1,2-Dichlorobenzene	ND		10.0	10.2		ug/L	102	70 - 130	4	20
1,2-Dichloroethane	ND		10.0	9.47		ug/L	95	56 - 146	4	20
1,2-Dichloropropane	ND		10.0	9.42		ug/L	94	69 - 130	1	20
1,3,5-Trimethylbenzene	ND		10.0	10.8		ug/L	108	70 - 130	2	20
1,3-Dichlorobenzene	ND		10.0	10.2		ug/L	102	70 - 130	3	20
1,3-Dichloropropane	ND		10.0	10.1		ug/L	101	70 - 130	5	25
1,4-Dichlorobenzene	ND		10.0	10.2		ug/L	102	70 - 130	4	20
2,2-Dichloropropane	ND		10.0	10.6		ug/L	106	69 - 138	3	25
2-Chlorotoluene	ND		10.0	10.4		ug/L	104	70 - 130	3	20
4-Chlorotoluene	ND		10.0	10.3		ug/L	103	70 - 130	2	20
Acetone	ND		50.0	54.9		ug/L	110	10 - 150	5	35
Benzene	ND		10.0	9.90		ug/L	99	66 - 130	3	20
Bromobenzene	ND		10.0	10.4		ug/L	104	70 - 130	6	20
Bromochloromethane	ND		10.0	10.1		ug/L	101	70 - 130	5	25
Bromodichloromethane	ND		10.0	9.86		ug/L	99	70 - 138	2	20
Bromoform	ND		10.0	11.4		ug/L	114	59 - 150	6	25
Bromomethane	ND		10.0	9.83		ug/L	98	62 - 131	3	25
Carbon tetrachloride	ND		10.0	10.2		ug/L	102	60 - 150	4	25
Chlorobenzene	ND		10.0	10.2		ug/L	102	70 - 130	5	20
Chloroethane	ND		10.0	10.5		ug/L	105	68 - 130	9	25
Chloroform	ND		10.0	9.49		ug/L	95	70 - 130	2	20
Chloromethane	ND		10.0	9.81		ug/L	98	39 - 144	1	25
cis-1,2-Dichloroethene	ND		10.0	9.93		ug/L	99	70 - 130	3	20
cis-1,3-Dichloropropene	ND		10.0	10.3		ug/L	103	70 - 133	6	20

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-282833-2 MSD				Client Sample ID: Grab Prep Type: Total/NA						
Matrix: Water										
Analysis Batch: 646505										
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD Limit	RPD Limit
Dibromochloromethane	ND		10.0	10.4		ug/L	104	70 - 148	5	25
Dibromomethane	ND		10.0	10.2		ug/L	102	70 - 130	4	25
Dichlorodifluoromethane	ND		10.0	11.3		ug/L	113	25 - 142	4	30
Ethylbenzene	ND		10.0	10.3		ug/L	103	70 - 130	1	20
Hexachlorobutadiene	ND		10.0	10.0		ug/L	100	10 - 150	1	20
Isopropyl alcohol	ND		250	303		ug/L	121	46 - 142	18	40
Isopropylbenzene	ND		10.0	10.5		ug/L	105	70 - 132	1	20
m,p-Xylene	ND		10.0	10.3		ug/L	103	70 - 133	1	25
Methylene Chloride	ND		10.0	9.52		ug/L	95	52 - 130	5	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.66		ug/L	97	70 - 130	2	25
Naphthalene	ND		10.0	9.77		ug/L	98	60 - 140	4	30
n-Butylbenzene	ND		10.0	11.0		ug/L	110	61 - 149	0	20
N-Propylbenzene	ND		10.0	10.8		ug/L	108	66 - 135	2	20
o-Xylene	ND		10.0	10.5		ug/L	105	70 - 133	5	20
p-Isopropyltoluene	ND		10.0	10.9		ug/L	109	70 - 130	1	20
sec-Butylbenzene	ND		10.0	11.0		ug/L	110	67 - 134	2	20
Styrene	ND		10.0	9.97		ug/L	100	29 - 150	5	35
tert-Butylbenzene	ND		10.0	11.0		ug/L	110	70 - 130	1	20
Tetrachloroethene	ND		10.0	10.9		ug/L	109	70 - 137	0	20
Toluene	ND		10.0	9.96		ug/L	100	70 - 130	2	20
trans-1,2-Dichloroethene	ND		10.0	10.2		ug/L	102	70 - 130	2	20
trans-1,3-Dichloropropene	ND		10.0	10.5		ug/L	105	70 - 138	5	25
Trichloroethene	ND		10.0	9.68		ug/L	97	70 - 130	3	20
Trichlorofluoromethane	ND		10.0	10.7		ug/L	107	60 - 150	6	25
Vinyl chloride	ND		10.0	10.6		ug/L	106	50 - 137	6	30
Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits							
1,2-Dichloroethane-d4 (Surr)	94		70 - 130							
4-Bromofluorobenzene (Surr)	102		80 - 120							
Dibromofluoromethane (Surr)	97		76 - 132							
Toluene-d8 (Surr)	103		80 - 128							

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-646376/1-A				Client Sample ID: Method Blank Prep Type: Total/NA						
Matrix: Water				Prep Batch: 646376						
Analysis Batch: 646607										
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
1,2,4-Trichlorobenzene	ND		10	ug/L	05/11/21 16:54	05/13/21 19:03		1		
1,2-Dichlorobenzene	ND		10	ug/L	05/11/21 16:54	05/13/21 19:03		1		
1,2-Diphenylhydrazine(as Azobenzene)	ND		20	ug/L	05/11/21 16:54	05/13/21 19:03		1		
1,3-Dichlorobenzene	ND		10	ug/L	05/11/21 16:54	05/13/21 19:03		1		
1,4-Dichlorobenzene	ND		10	ug/L	05/11/21 16:54	05/13/21 19:03		1		
2,4,5-Trichlorophenol	ND		20	ug/L	05/11/21 16:54	05/13/21 19:03		1		
2,4,6-Trichlorophenol	ND		20	ug/L	05/11/21 16:54	05/13/21 19:03		1		
2,4-Dichlorophenol	ND		10	ug/L	05/11/21 16:54	05/13/21 19:03		1		
2,4-Dimethylphenol	ND		20	ug/L	05/11/21 16:54	05/13/21 19:03		1		

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** MB 440-646376/1-A

**Matrix:** Water

**Analysis Batch:** 646607

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 646376

Analyte	MB	MB	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol		ND			40	ug/L	05/11/21 16:54	05/13/21 19:03		1
2,4-Dinitrotoluene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
2,6-Dinitrotoluene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
2-Chloronaphthalene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
2-Chlorophenol		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
2-Methylnaphthalene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
2-Methylphenol		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
2-Nitroaniline		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
2-Nitrophenol		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
3,3'-Dichlorobenzidine		ND			40	ug/L	05/11/21 16:54	05/13/21 19:03		1
3-Methylphenol + 4-Methylphenol		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
3-Nitroaniline		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
4,6-Dinitro-2-methylphenol		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
4-Bromophenyl phenyl ether		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
4-Chloro-3-methylphenol		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
4-Chloroaniline		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
4-Chlorophenyl phenyl ether		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
4-Nitroaniline		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
4-Nitrophenol		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Acenaphthene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Acenaphthylene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Aniline		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Anthracene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzidine		ND			40	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzo[a]anthracene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzo[a]pyrene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzo[b]fluoranthene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzo[g,h,i]perylene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzo[k]fluoranthene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzoic acid		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzyl alcohol		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
bis (2-chloroisopropyl) ether		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Bis(2-chloroethoxy)methane		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Bis(2-chloroethyl)ether		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Bis(2-ethylhexyl) phthalate		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Butyl benzyl phthalate		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Chrysene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Dibenz(a,h)anthracene		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Dibenzofuran		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Diethyl phthalate		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Dimethyl phthalate		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Di-n-butyl phthalate		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Di-n-octyl phthalate		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Fluoranthene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Fluorene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Hexachlorobenzene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Hexachlorobutadiene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Hexachlorocyclopentadiene		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Hexachloroethane		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-646376/1-A**

**Matrix: Water**

**Analysis Batch: 646607**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 646376**

Analyte	MB	MB	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	ND				20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Isophorone	ND				10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Naphthalene	ND				10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Nitrobenzene	ND				20	ug/L	05/11/21 16:54	05/13/21 19:03		1
N-Nitrosodimethylamine	ND				20	ug/L	05/11/21 16:54	05/13/21 19:03		1
N-Nitrosodi-n-propylamine	ND				10	ug/L	05/11/21 16:54	05/13/21 19:03		1
N-Nitrosodiphenylamine	ND				10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Pentachlorophenol	ND				20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Phenanthrene	ND				10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Phenol	ND				10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Pyrene	ND				10	ug/L	05/11/21 16:54	05/13/21 19:03		1
<b>MB MB</b>		<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>		<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>	
2,4,6-Tribromophenol (Surr)	84				40 - 120		05/11/21 16:54	05/13/21 19:03		1
2-Fluorobiphenyl	92				50 - 120		05/11/21 16:54	05/13/21 19:03		1
2-Fluorophenol (Surr)	75				30 - 120		05/11/21 16:54	05/13/21 19:03		1
Nitrobenzene-d5 (Surr)	92				45 - 120		05/11/21 16:54	05/13/21 19:03		1
Phenol-d6 (Surr)	84				35 - 120		05/11/21 16:54	05/13/21 19:03		1
Terphenyl-d14 (Surr)	91				10 - 150		05/11/21 16:54	05/13/21 19:03		1

**Lab Sample ID: LCS 440-646376/2-A**

**Matrix: Water**

**Analysis Batch: 646607**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 646376**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	%Rec.	
	Added	Result	Qualifier						
1,2,4-Trichlorobenzene	100	79.1		ug/L		79	25 - 84		
1,2-Dichlorobenzene	100	82.1		ug/L		82	24 - 85		
1,2-Diphenylhydrazine(as Azobenzene)	100	104		ug/L		104	44 - 113		
1,3-Dichlorobenzene	100	77.3		ug/L		77	20 - 80		
1,4-Dichlorobenzene	100	81.0		ug/L		81	22 - 81		
2,4,5-Trichlorophenol	100	97.7		ug/L		98	24 - 121		
2,4,6-Trichlorophenol	100	96.1		ug/L		96	20 - 121		
2,4-Dichlorophenol	100	94.1		ug/L		94	23 - 113		
2,4-Dimethylphenol	100	92.5		ug/L		92	39 - 94		
2,4-Dinitrophenol	200	226		ug/L		113	23 - 134		
2,4-Dinitrotoluene	100	117 *+		ug/L		117	54 - 115		
2,6-Dinitrotoluene	100	110		ug/L		110	50 - 115		
2-Chloronaphthalene	100	90.5		ug/L		90	34 - 102		
2-Chlorophenol	100	90.2		ug/L		90	20 - 106		
2-Methylnaphthalene	100	86.5		ug/L		87	34 - 98		
2-Methylphenol	100	101		ug/L		101	36 - 103		
2-Nitroaniline	100	113 *+		ug/L		113	48 - 111		
2-Nitrophenol	100	92.5		ug/L		93	20 - 117		
3,3'-Dichlorobenzidine	100	86.2		ug/L		86	22 - 97		
3-Methylphenol + 4-Methylphenol	100	103		ug/L		103	35 - 106		
3-Nitroaniline	100	103		ug/L		103	51 - 116		
4,6-Dinitro-2-methylphenol	200	220		ug/L		110	28 - 139		
4-Bromophenyl phenyl ether	100	83.4		ug/L		83	42 - 113		

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-646376/2-A**

**Matrix: Water**

**Analysis Batch: 646607**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 646376**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
4-Chloro-3-methylphenol	100	103		ug/L		103	44 - 110	
4-Chloroaniline	100	88.6		ug/L		89	42 - 109	
4-Chlorophenyl phenyl ether	100	91.5		ug/L		91	38 - 115	
4-Nitroaniline	100	113		ug/L		113	50 - 116	
4-Nitrophenol	200	251		ug/L		125	26 - 132	
Acenaphthene	100	92.9		ug/L		93	37 - 107	
Acenaphthylene	100	94.8		ug/L		95	39 - 107	
Aniline	100	96.2		ug/L		96	27 - 115	
Anthracene	100	87.4		ug/L		87	42 - 120	
Benzidine	100	ND		ug/L		19	5 - 150	
Benzo[a]anthracene	100	87.1		ug/L		87	42 - 115	
Benzo[a]pyrene	100	96.1		ug/L		96	41 - 117	
Benzo[b]fluoranthene	100	95.9		ug/L		96	36 - 113	
Benzo[g,h,i]perylene	100	90.9		ug/L		91	37 - 115	
Benzo[k]fluoranthene	100	107		ug/L		107	42 - 122	
Benzoic acid	100	96.5		ug/L		97	15 - 121	
Benzyl alcohol	100	102		ug/L		102	39 - 106	
bis (2-chloroisopropyl) ether	100	101		ug/L		101	38 - 104	
Bis(2-chloroethoxy)methane	100	98.6		ug/L		99	47 - 104	
Bis(2-chloroethyl)ether	100	98.4		ug/L		98	42 - 99	
Bis(2-ethylhexyl) phthalate	100	89.1		ug/L		89	43 - 124	
Butyl benzyl phthalate	100	88.1		ug/L		88	44 - 122	
Chrysene	100	82.7		ug/L		83	42 - 118	
Dibenz(a,h)anthracene	100	92.8		ug/L		93	40 - 114	
Dibenzofuran	100	92.5		ug/L		93	37 - 113	
Diethyl phthalate	100	111		ug/L		111	51 - 120	
Dimethyl phthalate	100	108		ug/L		108	49 - 113	
Di-n-butyl phthalate	100	98.1		ug/L		98	47 - 125	
Di-n-octyl phthalate	100	82.9		ug/L		83	42 - 125	
Fluoranthene	100	96.5		ug/L		96	44 - 119	
Fluorene	100	95.0		ug/L		95	39 - 116	
Hexachlorobenzene	100	82.4		ug/L		82	43 - 112	
Hexachlorobutadiene	100	62.4		ug/L		62	14 - 77	
Hexachlorocyclopentadiene	100	45.9		ug/L		46	10 - 77	
Hexachloroethane	100	70.5		ug/L		71	13 - 75	
Indeno[1,2,3-cd]pyrene	100	115		ug/L		115	35 - 116	
Isophorone	100	104		ug/L		104	48 - 107	
Naphthalene	100	90.6		ug/L		91	33 - 95	
Nitrobenzene	100	98.0		ug/L		98	42 - 99	
N-Nitrosodimethylamine	100	85.2		ug/L		85	35 - 96	
N-Nitrosodi-n-propylamine	100	111		ug/L		111	44 - 111	
N-Nitrosodiphenylamine	100	106		ug/L		106	46 - 116	
Pentachlorophenol	200	199		ug/L		100	26 - 136	
Phenanthrene	100	88.5		ug/L		89	43 - 120	
Phenol	100	96.1		ug/L		96	25 - 99	
Pyrene	100	85.2		ug/L		85	43 - 119	

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-646376/2-A**

**Matrix: Water**

**Analysis Batch: 646607**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 646376**

Surrogate	LCS	LCS	
	%Recovery	Qualifier	Limits
2,4,6-Tribromophenol (Surr)	99		40 - 120
2-Fluorobiphenyl	91		50 - 120
2-Fluorophenol (Surr)	85		30 - 120
Nitrobenzene-d5 (Surr)	98		45 - 120
Phenol-d6 (Surr)	95		35 - 120
Terphenyl-d14 (Surr)	95		10 - 150

**Lab Sample ID: LCSD 440-646376/3-A**

**Matrix: Water**

**Analysis Batch: 646607**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 646376**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
						Limits	Limits	Limit
1,2,4-Trichlorobenzene	100	79.3		ug/L	79	25 - 84	0	35
1,2-Dichlorobenzene	100	84.6		ug/L	85	24 - 85	3	35
1,2-Diphenylhydrazine(as Azobenzene)	100	107		ug/L	107	44 - 113	3	35
1,3-Dichlorobenzene	100	79.4		ug/L	79	20 - 80	3	35
1,4-Dichlorobenzene	100	80.2		ug/L	80	22 - 81	1	35
2,4,5-Trichlorophenol	100	97.8		ug/L	98	24 - 121	0	35
2,4,6-Trichlorophenol	100	95.2		ug/L	95	20 - 121	1	35
2,4-Dichlorophenol	100	94.9		ug/L	95	23 - 113	1	35
2,4-Dimethylphenol	100	94.1		ug/L	94	39 - 94	2	35
2,4-Dinitrophenol	200	230		ug/L	115	23 - 134	2	35
2,4-Dinitrotoluene	100	117 *+		ug/L	117	54 - 115	0	35
2,6-Dinitrotoluene	100	109		ug/L	109	50 - 115	1	35
2-Chloronaphthalene	100	93.4		ug/L	93	34 - 102	3	35
2-Chlorophenol	100	90.5		ug/L	91	20 - 106	0	35
2-Methylnaphthalene	100	88.4		ug/L	88	34 - 98	2	35
2-Methylphenol	100	99.5		ug/L	100	36 - 103	1	35
2-Nitroaniline	100	112 *+		ug/L	112	48 - 111	0	35
2-Nitrophenol	100	92.9		ug/L	93	20 - 117	0	35
3,3'-Dichlorobenzidine	100	85.6		ug/L	86	22 - 97	1	35
3-Methylphenol + 4-Methylphenol	100	103		ug/L	103	35 - 106	1	35
3-Nitroaniline	100	98.3		ug/L	98	51 - 116	4	35
4,6-Dinitro-2-methylphenol	200	220		ug/L	110	28 - 139	0	35
4-Bromophenyl phenyl ether	100	92.4		ug/L	92	42 - 113	10	35
4-Chloro-3-methylphenol	100	104		ug/L	104	44 - 110	1	35
4-Chloroaniline	100	84.3		ug/L	84	42 - 109	5	35
4-Chlorophenyl phenyl ether	100	94.8		ug/L	95	38 - 115	4	35
4-Nitroaniline	100	108		ug/L	108	50 - 116	4	35
4-Nitrophenol	200	246		ug/L	123	26 - 132	2	35
Acenaphthene	100	94.9		ug/L	95	37 - 107	2	35
Acenaphthylene	100	96.2		ug/L	96	39 - 107	1	35
Aniline	100	95.7		ug/L	96	27 - 115	0	35
Anthracene	100	96.4		ug/L	96	42 - 120	10	35
Benzidine	100	26.0 J		ug/L	26	5 - 150	29	35
Benzo[a]anthracene	100	93.7		ug/L	94	42 - 115	7	35
Benzo[a]pyrene	100	107		ug/L	107	41 - 117	11	35
Benzo[b]fluoranthene	100	104		ug/L	104	36 - 113	8	35

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 440-646376/3-A**

**Matrix: Water**

**Analysis Batch: 646607**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 646376**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	RPD Limit
Benzo[g,h,i]perylene	100	102		ug/L	102	37 - 115	11	35	
Benzo[k]fluoranthene	100	115		ug/L	115	42 - 122	7	35	
Benzoic acid	100	99.0		ug/L	99	15 - 121	3	35	
Benzyl alcohol	100	101		ug/L	101	39 - 106	0	35	
bis (2-chloroisopropyl) ether	100	100		ug/L	100	38 - 104	1	35	
Bis(2-chloroethoxy)methane	100	97.3		ug/L	97	47 - 104	1	35	
Bis(2-chloroethyl)ether	100	96.9		ug/L	97	42 - 99	2	35	
Bis(2-ethylhexyl) phthalate	100	97.7		ug/L	98	43 - 124	9	35	
Butyl benzyl phthalate	100	97.5		ug/L	97	44 - 122	10	35	
Chrysene	100	91.7		ug/L	92	42 - 118	10	35	
Dibenz(a,h)anthracene	100	105		ug/L	105	40 - 114	12	35	
Dibenzo furan	100	95.5		ug/L	95	37 - 113	3	35	
Diethyl phthalate	100	109		ug/L	109	51 - 120	1	35	
Dimethyl phthalate	100	107		ug/L	107	49 - 113	1	35	
Di-n-butyl phthalate	100	105		ug/L	105	47 - 125	7	35	
Di-n-octyl phthalate	100	93.4		ug/L	93	42 - 125	12	35	
Fluoranthene	100	104		ug/L	104	44 - 119	8	35	
Fluorene	100	100		ug/L	100	39 - 116	5	35	
Hexachlorobenzene	100	91.5		ug/L	92	43 - 112	10	35	
Hexachlorobutadiene	100	66.4		ug/L	66	14 - 77	6	35	
Hexachlorocyclopentadiene	100	55.2		ug/L	55	10 - 77	18	35	
Hexachloroethane	100	71.8		ug/L	72	13 - 75	2	35	
Indeno[1,2,3-cd]pyrene	100	112		ug/L	112	35 - 116	3	35	
Isophorone	100	104		ug/L	104	48 - 107	0	35	
Naphthalene	100	89.5		ug/L	90	33 - 95	1	35	
Nitrobenzene	100	98.3		ug/L	98	42 - 99	0	35	
N-Nitrosodimethylamine	100	86.4		ug/L	86	35 - 96	1	35	
N-Nitrosodi-n-propylamine	100	107		ug/L	107	44 - 111	4	35	
N-Nitrosodiphenylamine	100	108		ug/L	108	46 - 116	2	35	
Pentachlorophenol	200	210		ug/L	105	26 - 136	5	35	
Phenanthrene	100	96.1		ug/L	96	43 - 120	8	35	
Phenol	100	96.8		ug/L	97	25 - 99	1	35	
Pyrene	100	89.7		ug/L	90	43 - 119	5	35	

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	102		40 - 120
2-Fluorobiphenyl	92		50 - 120
2-Fluorophenol (Surr)	85		30 - 120
Nitrobenzene-d5 (Surr)	98		45 - 120
Phenol-d6 (Surr)	95		35 - 120
Terphenyl-d14 (Surr)	94		10 - 150

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## Method: 8270C SIM - 1,4 Dioxane by SIM

**Lab Sample ID:** MB 440-646203/1-A

**Matrix:** Water

**Analysis Batch:** 646743

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	ug/L		05/10/21 15:25	05/14/21 15:30	1
<b>Surrogate</b>	<b>MB %Recovery</b>	<b>MB Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,4-Dioxane-d8 (Surr)	50		27 - 120			05/10/21 15:25	05/14/21 15:30	1

**Lab Sample ID:** LCS 440-646203/3-A

**Matrix:** Water

**Analysis Batch:** 646743

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	
1,4-Dioxane		2.00	1.15		ug/L		58	36 - 120
<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>LCS Qualifier</b>	<b>Limits</b>					
1,4-Dioxane-d8 (Surr)	60		27 - 120					

**Lab Sample ID:** LCSD 440-646203/4-A

**Matrix:** Water

**Analysis Batch:** 646743

Analyte		Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD
1,4-Dioxane		2.00	0.919		ug/L		46	36 - 120
<b>Surrogate</b>	<b>LCSD %Recovery</b>	<b>LCSD Qualifier</b>	<b>Limits</b>					
1,4-Dioxane-d8 (Surr)	46		27 - 120					

## Method: SM 2540D - Solids, Total Suspended (TSS)

**Lab Sample ID:** MB 440-646155/1

**Matrix:** Water

**Analysis Batch:** 646155

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	mg/L			05/10/21 10:18	1

**Lab Sample ID:** LCS 440-646155/2

**Matrix:** Water

**Analysis Batch:** 646155

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	
Total Suspended Solids		1000	985		mg/L		99	85 - 115

**Lab Sample ID:** 590-15078-B-1 DU

**Matrix:** Water

**Analysis Batch:** 646155

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD
Total Suspended Solids	1900		1870		mg/L		2

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## Method: SM 4500 H+ B - pH

**Lab Sample ID:** 440-282874-G-1 DU

**Matrix:** Water

**Analysis Batch:** 646099

**Client Sample ID:** Duplicate  
**Prep Type:** Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.0		8.1		SU		0.5	2

## Method: SM 4500 S2 D - Sulfide, Total

**Lab Sample ID:** MB 440-646056/1-A

**Matrix:** Water

**Analysis Batch:** 646062

**Client Sample ID:** Method Blank  
**Prep Type:** Dissolved  
**Prep Batch:** 646056

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Dissolved	ND		0.050	mg/L		05/07/21 16:10	05/07/21 17:01	1

**Lab Sample ID:** LCS 440-646056/2-A

**Matrix:** Water

**Analysis Batch:** 646062

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Dissolved  
**Prep Batch:** 646056

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Sulfide, Dissolved	0.501	0.496		mg/L		99	80 - 120

**Lab Sample ID:** 440-282874-H-1-B MS

**Matrix:** Water

**Analysis Batch:** 646062

**Client Sample ID:** Matrix Spike  
**Prep Type:** Dissolved  
**Prep Batch:** 646056

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Sulfide, Dissolved	ND	HF	0.501	0.431	HF	mg/L		86	70 - 130

**Lab Sample ID:** 440-282874-H-1-C MSD

**Matrix:** Water

**Analysis Batch:** 646062

**Client Sample ID:** Matrix Spike Duplicate  
**Prep Type:** Dissolved  
**Prep Batch:** 646056

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RDP	RPD Limit
Sulfide, Dissolved	ND	HF	0.501	0.449	HF	mg/L		90	70 - 130	4 30

## Method: SM 5220D - COD

**Lab Sample ID:** MB 440-646749/3

**Matrix:** Water

**Analysis Batch:** 646749

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	mg/L			05/14/21 14:37	1

**Lab Sample ID:** LCS 440-646749/4

**Matrix:** Water

**Analysis Batch:** 646749

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Chemical Oxygen Demand	200	209		mg/L		105	90 - 110

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: SM 5220D - COD (Continued)

**Lab Sample ID: 440-282833-1 MS**

**Matrix: Water**

**Analysis Batch: 646749**

**Client Sample ID: Composite**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits		
Chemical Oxygen Demand	310		200	497		mg/L		96	70 - 120		

**Lab Sample ID: 440-282833-1 MSD**

**Matrix: Water**

**Analysis Batch: 646749**

**Client Sample ID: Composite**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	Limit
Chemical Oxygen Demand	310		200	508		mg/L		101	70 - 120	2	15

**Lab Sample ID: 440-283270-B-1 DU**

**Matrix: Water**

**Analysis Batch: 646749**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	Limit
Chemical Oxygen Demand	88			100		mg/L				13	15

# QC Association Summary

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## GC/MS VOA

### Analysis Batch: 646503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2 - RA	Grab	Total/NA	Water	8260B	
MB 440-646503/4	Method Blank	Total/NA	Water	8260B	
LCS 440-646503/1002	Lab Control Sample	Total/NA	Water	8260B	
440-283076-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-283076-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 646505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Total/NA	Water	8260B	
440-282833-2	Grab	Total/NA	Water	8260B	
MB 440-646505/4	Method Blank	Total/NA	Water	8260B	
LCS 440-646505/1002	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-646505/1003	Lab Control Sample	Total/NA	Water	8260B	
440-282833-2 MS	Grab	Total/NA	Water	8260B	
440-282833-2 MSD	Grab	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 646203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Total/NA	Water	3520C	
MB 440-646203/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-646203/3-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-646203/4-A	Lab Control Sample Dup	Total/NA	Water	3520C	

### Prep Batch: 646376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Total/NA	Water	3520C	
MB 440-646376/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-646376/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-646376/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

### Analysis Batch: 646607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Total/NA	Water	8270C	
MB 440-646376/1-A	Method Blank	Total/NA	Water	8270C	
LCS 440-646376/2-A	Lab Control Sample	Total/NA	Water	8270C	
LCSD 440-646376/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	

### Analysis Batch: 646743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Total/NA	Water	8270C SIM	
MB 440-646203/1-A	Method Blank	Total/NA	Water	8270C SIM	
LCS 440-646203/3-A	Lab Control Sample	Total/NA	Water	8270C SIM	
LCSD 440-646203/4-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	

## General Chemistry

### Prep Batch: 646056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Dissolved	Water	SM 4500 S2 B	
MB 440-646056/1-A	Method Blank	Dissolved	Water	SM 4500 S2 B	

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# QC Association Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## General Chemistry (Continued)

### Prep Batch: 646056 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-646056/2-A	Lab Control Sample	Dissolved	Water	SM 4500 S2 B	
440-282874-H-1-B MS	Matrix Spike	Dissolved	Water	SM 4500 S2 B	
440-282874-H-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	SM 4500 S2 B	

### Analysis Batch: 646062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Dissolved	Water	SM 4500 S2 D	
MB 440-646056/1-A	Method Blank	Dissolved	Water	SM 4500 S2 D	
LCS 440-646056/2-A	Lab Control Sample	Dissolved	Water	SM 4500 S2 D	
440-282874-H-1-B MS	Matrix Spike	Dissolved	Water	SM 4500 S2 D	
440-282874-H-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	SM 4500 S2 D	

### Analysis Batch: 646099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Total/NA	Water	SM 4500 H+ B	
440-282874-G-1 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	

### Analysis Batch: 646155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-1	Composite	Total/NA	Water	SM 2540D	
MB 440-646155/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-646155/2	Lab Control Sample	Total/NA	Water	SM 2540D	
590-15078-B-1 DU	Duplicate	Total/NA	Water	SM 2540D	

### Analysis Batch: 646749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-1	Composite	Total/NA	Water	SM 5220D	
MB 440-646749/3	Method Blank	Total/NA	Water	SM 5220D	
LCS 440-646749/4	Lab Control Sample	Total/NA	Water	SM 5220D	
440-282833-1 MS	Composite	Total/NA	Water	SM 5220D	
440-282833-1 MSD	Composite	Total/NA	Water	SM 5220D	
440-283270-B-1 DU	Duplicate	Total/NA	Water	SM 5220D	

## Field Service / Mobile Lab

### Analysis Batch: 646219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Total/NA	Water	Field Sampling	

# Definitions/Glossary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	1,1-Dichloropropene
8260B		Water	1,2,3-Trichlorobenzene
8260B		Water	1,2,4-Trimethylbenzene
8260B		Water	1,3,5-Trimethylbenzene
8260B		Water	1,3-Dichloropropane
8260B		Water	2,2-Dichloropropane
8260B		Water	2-Chlorotoluene
8260B		Water	Acetone
8260B		Water	Acrolein
8260B		Water	Acrylonitrile
8260B		Water	Isopropyl alcohol
8260B		Water	Isopropylbenzene
8260B		Water	m,p-Xylene
8260B		Water	p-Isopropyltoluene
8260B		Water	Total Volatile Organic Compounds
8270C	3520C	Water	1,2,4-Trichlorobenzene
8270C	3520C	Water	1,2-Diphenylhydrazine(as Azobenzene)
8270C	3520C	Water	2,4,5-Trichlorophenol
8270C	3520C	Water	2,4,6-Trichlorophenol
8270C	3520C	Water	2-Methylnaphthalene
8270C	3520C	Water	2-Methylphenol
8270C	3520C	Water	3-Methylphenol + 4-Methylphenol
8270C	3520C	Water	4,6-Dinitro-2-methylphenol
8270C	3520C	Water	bis (2-chloroisopropyl) ether
8270C	3520C	Water	Hexachlorobenzene
8270C	3520C	Water	Hexachlorobutadiene
8270C	3520C	Water	Hexachlorocyclopentadiene
8270C	3520C	Water	Hexachloroethane
8270C	3520C	Water	Indeno[1,2,3-cd]pyrene
8270C	3520C	Water	Isophorone
8270C	3520C	Water	Phenanthrene
8270C	3520C	Water	Phenol
8270C	3520C	Water	Pyrene
8270C SIM	3520C	Water	1,4-Dioxane
Field Sampling		Water	Field pH
Field Sampling		Water	Field Temperature

## Eurofins Calscience Irvine

17461 Dorian Ave Suite 100

Irvine CA 92614-5817

Phone: 949-261-1022 Fax: 949-260-3297

## Chain of Custody Record

eurofins Environment Testing America

### Client Information

Client Contact:  
Pamela Henriksen

Company:  
Jacob & Hefner Associates P.C.

Address:  
15375 Barranca Parkway J-101

City:  
Irvine

State, Zip:  
CA, 92618

Phone:  
949-453-1045 (Tel) 949-453-1047 (Fax)

Email:  
phenniksen@jacobandhefner.com

Project Name:  
Omega Chemical Wastewater

Site:  
California

*F. Rayes*

Phone: 714-651-2862

PWSID:

### Analysis Requested

Total Number of Containers

*10*

Date Due Requested:

TAT Requested (days):

*0*

Compliance Project:  Yes  No

PO #:

Omega Chemical Wastewater

WO #:

phenniksen@jacobandhefner.com

Project #: 44003641

SSOW#:

8260B-LL A+A+2CVE

8270C, 8270C-SIM

8260B-LL VOCs+Oxy's+Ks+F113-LL

SM4500-S2-D Dissolved Sulfide

2540D TSS

5220D COD

Sample Identification

Sample Date

Sample Time

Sample Type  
(C=comp,  
G=grab)

Preservation Code

S N B A N N

Matrix  
(WATER,  
Soil, Plant,  
Organic, Air)

Speciation  
(if applicable)

Other Notes

Special Instructions/Note

Composite  
Grab

5-6-21 7:00 C Water

5-6-21 7:05 G Water

<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Radiological	Date:	Time:	Method of Shipment:
Deliverable Requested I, II, III, IV Other (specify)								
Empty Kit Relinquished by:	<i>J. Rayes</i>	Date/Time:	5-6-21 12:45	Company	Received By:	<i>C. Ondras</i>	Date/Time:	Company
Relinquished by:	<i>J. Rayes</i>	Date/Time:	5-6-21 12:45	Company	Received By:	<i>C. Ondras</i>	Date/Time:	Company
Relinquished by:	<i>J. Rayes</i>	Date/Time:	5-6-21 12:45	Company	Received By:	<i>C. Ondras</i>	Date/Time:	Company
Custody Seals Intact:	Custody Seal No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Cooler Temperature(s) °C and Other Remarks: <i>Temp 21/18 /289</i>						

V&F 11/01/2020

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## Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-282833-1

SDG Number: Whittier, CA

**Login Number:** 282833

**List Source:** Eurofins Calscience Irvine

**List Number:** 1

**Creator:** Escalante, Maria I

### Question

### Answer

### Comment

Radioactivity wasn't checked or is </= background as measured by a survey meter.

The cooler's custody seal, if present, is intact.

Sample custody seals, if present, are intact.

The cooler or samples do not appear to have been compromised or tampered with.

Samples were received on ice.

Cooler Temperature is acceptable.

Cooler Temperature is recorded.

COC is present.

COC is filled out in ink and legible.

COC is filled out with all pertinent information.

Is the Field Sampler's name present on COC?

There are no discrepancies between the containers received and the COC.

Samples are received within Holding Time (excluding tests with immediate HTs)

Sample containers have legible labels.

Containers are not broken or leaking.

Sample collection date/times are provided.

Appropriate sample containers are used.

Sample bottles are completely filled.

Sample Preservation Verified.

There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Multiphasic samples are not present.

Samples do not require splitting or compositing.

Residual Chlorine Checked.

## **ATTACHMENT D**

# **Sanitation Districts of Los Angeles County Industrial Wastewater Self-Monitoring Report**

**OMEGA CHEMICAL SITE PRP ORGANIZED GROUP**

---

1322 Scott Street,  
Suite 104  
San Diego, CA 92106  
Office : (619)-546-8377, fax: (619) 546-9980  
e-mail: [edm@demaximis.com](mailto:edm@demaximis.com)

July 10, 2021

Mr. Robert Ferrante  
Chief Engineer and General Manager  
Sanitation Districts of Los Angeles County  
Industrial Waste Section  
P.O. Box 4998  
Whittier, CA 90607-4998

Subject:      Self-Monitoring Report - 2<sup>nd</sup> Quarter 2021  
                  Permit Number 20039, Surcharge Account Number 2113183

Dear Mr. Ferrante,

This letter transmits the 2<sup>nd</sup> Quarter 2021 Self-Monitoring Report (SMR) for the Omega Chemical Site located at 12520 East Whittier Blvd., Whittier, California. Feel free to contact me if you need any additional information.

Sincerely,

Omega Chemical Site PRP Organized Group



Edward Modiano  
Project Coordinator



**LOS ANGELES COUNTY  
SANITATION DISTRICTS**

Converting Waste Into Resources

ROBERT C. FERRANTE  
CHIEF ENGINEER  
AND GENERAL MANAGER

Page 1 of 4  
Permit Number:  
**20039**  
Facility ID:  
**2113183**

For information, please call Loretta Benites  
(562) 699-7411 Ext. 2927

**INDUSTRIAL WASTEWATER SELF MONITORING REPORT**

**Reporting Period From: 04/01/2021 To: 06/30/2021 Report Due No Later Than : 07/15/2021**

Company Name: **Omega Chemical Site PRP Group LLC**

Wastewater Discharge Address: **12520 WHITTIER Blvd Whittier, CA, 90602**

Sample Location: **20039A**

Mailing Address: **1322 Scott Street # 104 San Diego, CA, 92106**

Industrial Wastewater Contact Name and Phone Number: **Mr. Ravi Subramanian**

**949-752-5452 x277 - Business**

Has Ownership or Occupancy Changed Since the Last Report?  Yes  No

(Print) Name of Company Collecting Wastewater Sample:

**Test America**

(Print) Sample Date:

**5/6/2021**

Daily Wastewater Discharge for Reporting Period

Average:	<b>5,080</b>	GPD
Maximum:	<b>7,840</b>	GPD

Method For Determining Wastewater Flow for Sampling Day

- Direct Measurement  
 Adjusted Metered Water Supply  
 No Discharge During Reporting Period

Type of Composite Sample

- Time Composite  
 Flow Proportioned Composite

Comments:

<u>Parameter (1)</u>	<u>Sample Method (2)</u>	<u>Permit Limit (3)</u>	<u>Test Results (4)</u>	<u>Reporting Limit (5)</u>	<u>Unit (6)</u>	<u>Lab ID Code (7)</u>
Z02 Sample Day Peak Flow			12.5		gpm	
Z01 Sample Day Total Flow			6,536		GPD	
101 pH	GRAB	Federal Daily Minimum 5.0 S.U. Local Daily Minimum 6.0 S.U.	8.3 J		S.U.	10256
151 Solids, Suspended	COMPOSITE		6.0		mg/L	10256
252 Sulfide, Soluble	GRAB	Local At Any Time 0.1 mg/L	ND	0.050	mg/L	10256
403 COD, Total	COMPOSITE		310		mg/L	10256
696 1,4-Dioxane	GRAB		8.4 J		ug/L	10256
T09 TTO, Volatile	GRAB	Local At Any Time 1000 ug/L	LACSD calculates this value.		ug/L	
601 Methylene Chloride	GRAB		ND	5.0	ug/L	10256
602 Chloroform	GRAB		ND	1.0	ug/L	10256
603 1,1,1-Trichloroethane	GRAB		ND	1.0	ug/L	10256
604 Carbon Tetrachloride	GRAB		ND	0.50	ug/L	10256
605 1,1-Dichloroethene	GRAB		ND	1.0	ug/L	10256
606 Trichloroethylene	GRAB		ND	1.0	ug/L	10256
607 Tetrachloroethylene	GRAB		ND	1.0	ug/L	10256
608 Bromodichloromethane	GRAB		ND	1.0	ug/L	10256
609 Dibromochloromethane	GRAB		ND	1.0	ug/L	10256
610 Bromoform	GRAB		ND	1.0	ug/L	10256
611 Chlorobenzene	GRAB		ND	1.0	ug/L	10256
612 Vinyl Chloride	GRAB		ND	0.50	ug/L	10256

Please submit this report to: Sanitation Districts of Los Angeles County - Industrial Waste Section P.O. Box 4998 Whittier, CA 90607-4998

Printed on  
Recycled Paper 

# INDUSTRIAL WASTEWATER SELF MONITORING REPORT

Report due no later than : 07/15/2021

Company Name: Omega Chemical Site PRP Group LLC

Sample Location: 20039A Reporting Period From: 04/01/2021 To: 06/30/2021

Page 2 of 4

Permit Number:

20039

Facility ID:

2113183

<u>Parameter (1)</u>	<u>Sample Method (2)</u>	<u>Permit Limit (3)</u>		<u>Test Results (4)</u>	<u>Reporting Limit (5)</u>	<u>Unit (6)</u>	<u>Lab ID Code (7)</u>
613 o-Dichlorobenzene	GRAB			ND	1.0	ug/L	10256
614 m-Dichlorobenzene	GRAB			ND	1.0	ug/L	10256
615 p-Dichlorobenzene	GRAB			ND	1.0	ug/L	10256
616 1,1-Dichloroethane	GRAB			ND	1.0	ug/L	10256
618 1,1,2-Trichloroethane	GRAB			ND	1.0	ug/L	10256
619 1,2-Dichloroethane	GRAB			ND	1.0	ug/L	10256
620 Benzene	GRAB			ND	0.5	ug/L	10256
621 Toluene	GRAB			ND	1.0	ug/L	10256
624 Ethyl Benzene	GRAB			ND	1.0	ug/L	10256
645 trans-1,2-Dichloroethylene	GRAB			ND	1.0	ug/L	10256
646 Bromomethane	GRAB			ND	1.0	ug/L	10256
647 Chloroethane	GRAB			ND	1.0	ug/L	10256
648 2-Chloroethylvinylether	GRAB			ND	2.0	ug/L	10256
649 Chloromethane	GRAB			ND	1.0	ug/L	10256
650 1,2-Dichloroproppane	GRAB			ND	1.0	ug/L	10256
651 cis-1,3-Dichloropropene	GRAB			ND	0.5	ug/L	10256
652 trans-1,3-Dichloropropene	GRAB			ND	0.5	ug/L	10256
653 1,1,2,2-Tetrachloroethane	GRAB			ND	1.0	ug/L	10256
T10 TTO, Semi-Volatile	GRAB	Local	At Any Time	1000 ug/L	LACSD calculates this value.	ug/L	
800 Acenaphthene	GRAB			ND	9.7	ug/L	10256
801 Acenaphthylene	GRAB			ND	9.7	ug/L	10256
802 Anthracene	GRAB			ND	9.7	ug/L	10256
803 Benzidine	GRAB			ND	39	ug/L	10256
804 Benzo(a)anthracene	GRAB			ND	9.7	ug/L	10256
805 Benzo(a)pyrene	GRAB			ND	9.7	ug/L	10256
806 Benzo(b)fluoranthene	GRAB			ND	9.7	ug/L	10256
807 Benzo(g.h.i.)perylene	GRAB			ND	9.7	ug/L	10256
808 Benzo(k)fluoranthene	GRAB			ND	9.7	ug/L	10256
809 Bis(2-cl-ethoxy)methane	GRAB			ND	9.7	ug/L	10256
810 Bis(2-chloroethyl)ether	GRAB			ND	9.7	ug/L	10256
811 Bis(2-cl-isopropyl)ether	GRAB			ND	9.7	ug/L	10256
812 bis(2-ethylhexyl) Phthalate	GRAB			ND	19	ug/L	10256
813 4-bromophenyl Phenylether	GRAB			ND	9.7	ug/L	10256
814 butylbenzyl Phthalate	GRAB			ND	19	ug/L	10256
815 2-Chloronaphthalene	GRAB			ND	9.7	ug/L	10256
816 4-Chlorophenylphenylether	GRAB			ND	9.7	ug/L	10256
817 Chrysene	GRAB			ND	9.7	ug/L	10256

Please submit this report to: Sanitation Districts of Los Angeles County - Industrial Waste Section P.O. Box 4998 Whittier, CA 90607-4998

## INDUSTRIAL WASTEWATER SELF MONITORING REPORT

Page 3 of 4

Report due no later than : 07/15/2021

Permit Number:

20039

Facility ID:

2113183

Company Name: Omega Chemical Site PRP Group LLC

Sample Location: 20039A Reporting Period From: 04/01/2021 To: 06/30/2021

<u>Parameter (1)</u>	<u>Sample Method (2)</u>	<u>Permit Limit (3)</u>	<u>Test Results (4)</u>	<u>Reporting Limit (5)</u>	<u>Unit (6)</u>	<u>Lab ID Code (7)</u>
818 dibenzo(a,h)Anthracene	GRAB		ND	19	ug/L	10256
822 3,3-Dichlorobenzidine	GRAB		ND	39	ug/L	10256
823 diethyl Phthalate	GRAB		ND	9.7	ug/L	10256
824 dimethyl Phthalate	GRAB		ND	9.7	ug/L	10256
825 di-n-butyl Phthalate	GRAB		ND	19	ug/L	10256
826 2,4-Dinitrotoluene	GRAB		ND	9.7	ug/L	10256
827 2,6-Dinitrotoluene	GRAB		ND	9.7	ug/L	10256
828 di-n-octyl Phthalate	GRAB		ND	19	ug/L	10256
829 1,2-Diphenylhydrazine	GRAB		ND	19	ug/L	10256
830 Fluoranthene	GRAB		ND	9.7	ug/L	10256
831 Fluorene	GRAB		ND	9.7	ug/L	10256
832 Hexachlorobenzene	GRAB		ND	9.7	ug/L	10256
833 Hexachlorobutadiene	GRAB		ND	9.7	ug/L	10256
834 Hexachlorocyclopentadiene	GRAB		ND	19	ug/L	10256
835 Hexachloroethane	GRAB		ND	9.7	ug/L	10256
836 Indeno(1,2,3-c,d)Pyrene	GRAB		ND	19	ug/L	10256
837 Isophorone	GRAB		ND	9.7	ug/L	10256
838 Naphthalene	GRAB		ND	9.7	ug/L	10256
839 Nitrobenzene	GRAB		ND	19	ug/L	10256
840 n-Nitrosodimethylamine	GRAB		ND	19	ug/L	10256
841 n-Nitrosodi-n-Propylamine	GRAB		ND	9.7	ug/L	10256
842 Phenanthrene	GRAB		ND	9.7	ug/L	10256
843 Pyrene	GRAB		ND	9.7	ug/L	10256
845 2-Chlorophenol (Organic-BNA)	GRAB		ND	9.7	ug/L	10256
846 1,2,4-Trichlorobenzene	GRAB		ND	9.7	ug/L	10256
847 2,4-Dichlorophenol (Organic-BNA)	GRAB		ND	9.7	ug/L	10256
848 2,4-Dimethylphenol (Organic-BNA)	GRAB		ND	19	ug/L	10256
849 2,4-Dinitrophenol	GRAB		ND	39	ug/L	10256
850 2-methyl-4,6-dinitrophenol	GRAB		ND	19	ug/L	10256
851 2-Nitrophenol	GRAB		ND	9.7	ug/L	10256
852 4-Nitrophenol	GRAB		ND	19	ug/L	10256
853 4-chloro-3-Methylphenol (Organic-BNA)	GRAB		ND	19	ug/L	10256
854 Pentachlorophenol (Organic-BNA)	GRAB		ND	19	ug/L	10256
855 Phenol	GRAB		ND	9.7	ug/L	10256

Please submit this report to: Sanitation Districts of Los Angeles County - Industrial Waste Section P.O. Box 4998 Whittier, CA 90607-4998

## INDUSTRIAL WASTEWATER SELF MONITORING REPORT

Page 4 of 4

Report due no later than : 07/15/2021

Permit Number:

20039

Facility ID:

2113183

Company Name: Omega Chemical Site PRP Group LLC

Sample Location: 20039A Reporting Period From: 04/01/2021 To: 06/30/2021

<u>Parameter (1)</u>	<u>Sample Method (2)</u>	<u>Permit Limit (3)</u>	<u>Test Results (4)</u>	<u>Reporting Limit (5)</u>	<u>Unit (6)</u>	<u>Lab ID Code (7)</u>
856 2,4,6-Trichlorophenol	GRAB		ND	19	ug/L	10256
857 n-Nitrosodiphenylamine	GRAB		ND	9.7	ug/L	10256

(1) Report the test results from the most recent sample collected within the reporting period and include all laboratory test sheets with the self-monitoring report form.

(2) Test results are valid only if the correct sampling method is observed and the laboratory analysis is performed by a State or Sanitation Districts approved laboratory.

(3) Permit limits are included on this form for convenience. For a full list of all applicable permit limits, refer to your Permit Data Sheet.

(4) Enter "ND" (Non Detect) for any result less than (<) the reporting limit.

(5) If the test result is "ND", enter the reporting limit, otherwise leave blank. The reporting limit can be found in your laboratory test sheet.

(6) Default units are listed. Cross out and write in applicable units if laboratory did not report results with these same units.

(7) Indicate the appropriate laboratory certification I.D. code for each testing parameter.

## CERTIFICATION BY PERMITTEE

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of responsible company official:

*Nicole Bradley*

Date:

7/10/2021

Nicole Bradley

Title:

Project Manager on Behalf of OPOG

Print name of official:

LACSD USE ONLY

Monitoring ID: 558552

Lab Report?

Yes

No

Signature?

Yes

No

Date Received: \_\_\_\_\_

Initials: \_\_\_\_\_



# LOS ANGELES COUNTY SANITATION DISTRICTS

## *Converting Waste Into Resources*

ROBERT C. FERRANTE  
CHIEF ENGINEER  
AND GENERAL MANAGER

For information, please call Jyoti Banaji  
(562) 699-7411 Ext. 2906

Page \_\_\_\_\_ of \_\_\_\_\_  
**Permit Number:** **20039**  
**Facility ID:** **2113183**

## **SUPPLEMENTAL MONITORING DATA (OPTIONAL)**

It is not mandatory to perform supplemental monitoring of your facility's wastewater discharge. However, if you choose to perform additional testing, you must report the results of all analyses using this form. Supplemental monitoring data should not include results used in Self-Monitoring Reports.

Company Name: **Omega Chemical Site PRP Group LLC**

Sample Location: 20039A Reporting Period From: 04/01/2021 To: 06/30/2021

(Print) Name of Company Collecting Wastewater Sample:

#### Comments:

- (1) Include all laboratory test sheets for each reported parameter.
  - (2) Test results are valid only if the correct sampling method is observed and the laboratory analysis is performed by a State or Sanitation Districts approved laboratory.
  - (3) Enter "ND" (Non Detect) for any result less than (<) the reporting limit.
  - (4) If the test result is "ND", enter the reporting limit; otherwise leave blank. The reporting limit can be found in your laboratory test sheet.
  - (5) Indicate the appropriate laboratory certification I.D. code for each testing parameter.
  - (6) If the results are from a split sample that was collected by the Sanitation Districts, write "Yes"; otherwise, leave blank.

**CERTIFICATION BY PERMITTEE**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

**Signature of responsible company official:**

Date:

Print name of official:

Title:

---

LACSD USE ONLY - Non-Permit SMR

Lab Report?  Yes  No

Signature?  Yes  No

Date Received:

Initials:

---

Please submit this report to: Sanitation Districts of Los Angeles County - Industrial Waste Section P.O. Box 4998 Whittier, CA 90607-4998



Environment Testing  
America



## ANALYTICAL REPORT

Eurofins Calscience Irvine  
17461 Derian Ave  
Suite 100  
Irvine, CA 92614-5817  
Tel: (949)261-1022

Laboratory Job ID: 440-282833-1

Laboratory Sample Delivery Group: Whittier, CA  
Client Project/Site: Omega Chemical Wastewater

**For:**

Jacob & Hefner Associates P.C.  
15375 Barranca Parkway, J-101  
Irvine, California 92618

Attn: Trent Henderson

Danielle Roberts

Authorized for release by:  
5/20/2021 2:03:46 PM

Danielle Roberts, Senior Project Manager  
(949)260-3249  
[Danielle.Roberts@Eurofinset.com](mailto:Danielle.Roberts@Eurofinset.com)

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Sample Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID	
440-282833-1	Composite	Water	05/06/21 07:00	05/06/21 12:45		1
440-282833-2	Grab	Water	05/06/21 07:05	05/06/21 12:45		2
						3
						4
						5
						6
						7
						8
						9
						10
						11
						12
						13
						14
						15

# Case Narrative

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## Job ID: 440-282833-1

### Laboratory: Eurofins Calscience Irvine

#### Narrative

#### Job Narrative 440-282833-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 5/6/2021 12:45 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.8° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method 8270C: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 440-646376 and analytical batch 440-646607 recovered outside control limits for the following analytes: 2,4-Dinitrotoluene and 2-Nitroaniline. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8270C: The continuing calibration verification (CCV) associated with batch 440-646607 recovered above the upper control limit for N-Nitrosodi-n-propylamine. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Field Service / Mobile Lab

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

Method 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-646203. A laboratory control sample duplicate (LCSD) was extracted to provide precision data.

Methods 3520C, 8270: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-646376.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## Client Sample ID: Composite

## Lab Sample ID: 440-282833-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	6.0		1.0	mg/L	1		SM 2540D	Total/NA
Chemical Oxygen Demand	310		20	mg/L	1		SM 5220D	Total/NA

## Client Sample ID: Grab

## Lab Sample ID: 440-282833-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	8.4		0.48	ug/L	1		8270C SIM	Total/NA
pH	8.3	HF	0.1	SU	1		SM 4500 H+ B	Total/NA
Field pH	8.29			SU	1		Field Sampling	Total/NA
Field Temperature	17.40			Celsius	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## **Client Sample ID: Composite**

Date Collected: 05/06/21 07:00  
 Date Received: 05/06/21 12:45

## **Lab Sample ID: 440-282833-1**

Matrix: Water

### **General Chemistry**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	6.0		1.0	mg/L			05/10/21 10:18	1
Chemical Oxygen Demand	310		20	mg/L			05/14/21 14:38	1

## **Client Sample ID: Grab**

Date Collected: 05/06/21 07:05  
 Date Received: 05/06/21 12:45

## **Lab Sample ID: 440-282833-2**

Matrix: Water

### **Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			05/12/21 21:49	1
1,1,1-Trichloroethane	ND		1.0	ug/L			05/12/21 21:49	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			05/12/21 21:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			05/12/21 21:49	1
Acrolein	ND		5.0	ug/L			05/12/21 23:09	1
1,1,2-Trichloroethane	ND		1.0	ug/L			05/12/21 21:49	1
Acrylonitrile	ND		2.0	ug/L			05/12/21 23:09	1
1,1-Dichloroethane	ND		1.0	ug/L			05/12/21 21:49	1
1,1-Dichloroethene	ND		1.0	ug/L			05/12/21 21:49	1
1,1-Dichloropropene	ND		1.0	ug/L			05/12/21 21:49	1
Total Volatile Organic Compounds	ND		150	ug/L			05/12/21 23:09	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			05/12/21 21:49	1
1,2,3-Trichloropropane	ND		1.0	ug/L			05/12/21 21:49	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			05/12/21 21:49	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			05/12/21 21:49	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			05/12/21 21:49	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			05/12/21 21:49	1
1,2-Dichlorobenzene	ND		1.0	ug/L			05/12/21 21:49	1
1,2-Dichloroethane	ND		1.0	ug/L			05/12/21 21:49	1
1,2-Dichloropropane	ND		1.0	ug/L			05/12/21 21:49	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			05/12/21 21:49	1
1,3-Dichlorobenzene	ND		1.0	ug/L			05/12/21 21:49	1
1,3-Dichloropropane	ND		1.0	ug/L			05/12/21 21:49	1
1,4-Dichlorobenzene	ND		1.0	ug/L			05/12/21 21:49	1
2,2-Dichloropropane	ND		1.0	ug/L			05/12/21 21:49	1
2-Chlorotoluene	ND		1.0	ug/L			05/12/21 21:49	1
4-Chlorotoluene	ND		1.0	ug/L			05/12/21 21:49	1
Acetone	ND		10	ug/L			05/12/21 21:49	1
Benzene	ND		0.50	ug/L			05/12/21 21:49	1
Bromobenzene	ND		1.0	ug/L			05/12/21 21:49	1
Bromochloromethane	ND		1.0	ug/L			05/12/21 21:49	1
Bromodichloromethane	ND		1.0	ug/L			05/12/21 21:49	1
Bromoform	ND		1.0	ug/L			05/12/21 21:49	1
Bromomethane	ND		1.0	ug/L			05/12/21 21:49	1
Carbon tetrachloride	ND		0.50	ug/L			05/12/21 21:49	1
Chlorobenzene	ND		1.0	ug/L			05/12/21 21:49	1
Chloroethane	ND		1.0	ug/L			05/12/21 21:49	1
Chloroform	ND		1.0	ug/L			05/12/21 21:49	1
Chloromethane	ND		1.0	ug/L			05/12/21 21:49	1
cis-1,2-Dichloroethene	ND		1.0	ug/L			05/12/21 21:49	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			05/12/21 21:49	1

Eurofins Calscience Irvine

# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Client Sample ID: Grab

Date Collected: 05/06/21 07:05  
 Date Received: 05/06/21 12:45

## Lab Sample ID: 440-282833-2

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		1.0	ug/L		05/12/21 21:49		1
Dibromomethane	ND		1.0	ug/L		05/12/21 21:49		1
Dichlorodifluoromethane	ND		1.0	ug/L		05/12/21 21:49		1
Ethylbenzene	ND		1.0	ug/L		05/12/21 21:49		1
Hexachlorobutadiene	ND		1.0	ug/L		05/12/21 21:49		1
Isopropyl alcohol	ND		250	ug/L		05/12/21 21:49		1
Isopropylbenzene	ND		1.0	ug/L		05/12/21 21:49		1
m,p-Xylene	ND		1.0	ug/L		05/12/21 21:49		1
Methylene Chloride	ND		5.0	ug/L		05/12/21 21:49		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		05/12/21 21:49		1
Naphthalene	ND		1.0	ug/L		05/12/21 21:49		1
n-Butylbenzene	ND		1.0	ug/L		05/12/21 21:49		1
N-Propylbenzene	ND		1.0	ug/L		05/12/21 21:49		1
o-Xylene	ND		1.0	ug/L		05/12/21 21:49		1
p-Isopropyltoluene	ND		1.0	ug/L		05/12/21 21:49		1
sec-Butylbenzene	ND		1.0	ug/L		05/12/21 21:49		1
Styrene	ND		1.0	ug/L		05/12/21 21:49		1
tert-Butylbenzene	ND		1.0	ug/L		05/12/21 21:49		1
Tetrachloroethene	ND		1.0	ug/L		05/12/21 21:49		1
Toluene	ND		1.0	ug/L		05/12/21 21:49		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		05/12/21 21:49		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		05/12/21 21:49		1
Trichloroethene	ND		1.0	ug/L		05/12/21 21:49		1
Trichlorofluoromethane	ND		1.0	ug/L		05/12/21 21:49		1
Vinyl chloride	ND		0.50	ug/L		05/12/21 21:49		1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		05/12/21 23:09	1
4-Bromofluorobenzene (Surr)	103		80 - 120		05/12/21 23:09	1
Dibromofluoromethane (Surr)	98		76 - 132		05/12/21 23:09	1
Toluene-d8 (Surr)	104		80 - 128		05/12/21 23:09	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		05/12/21 21:49	1
4-Bromofluorobenzene (Surr)	100		80 - 120		05/12/21 21:49	1
Dibromofluoromethane (Surr)	100		76 - 132		05/12/21 21:49	1
Toluene-d8 (Surr)	105		80 - 128		05/12/21 21:49	1

### Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloroethyl vinyl ether	ND		2.0	ug/L		05/12/21 23:36		1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130		05/12/21 23:36	1
4-Bromofluorobenzene (Surr)	101		80 - 120		05/12/21 23:36	1
Dibromofluoromethane (Surr)	98		76 - 132		05/12/21 23:36	1
Toluene-d8 (Surr)	101		80 - 128		05/12/21 23:36	1

### Method: 8270C SIM - 1,4 Dioxane by SIM

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	8.4		0.48	ug/L		05/10/21 15:25	05/14/21 16:35	1

Eurofins Calscience Irvine

# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Client Sample ID: Grab

Date Collected: 05/06/21 07:05  
 Date Received: 05/06/21 12:45

## Lab Sample ID: 440-282833-2

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	55		27 - 120	05/10/21 15:25	05/14/21 16:35	1

### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
1,2-Dichlorobenzene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
1,2-Diphenylhydrazine(as Azobenzene)	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
1,3-Dichlorobenzene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
1,4-Dichlorobenzene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2,4,5-Trichlorophenol	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
2,4,6-Trichlorophenol	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
2,4-Dichlorophenol	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2,4-Dimethylphenol	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
2,4-Dinitrophenol	ND		39	ug/L	05/11/21 16:54	05/13/21 20:17		1
2,4-Dinitrotoluene	ND *+		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2,6-Dinitrotoluene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2-Chloronaphthalene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2-Chlorophenol	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2-Methylnaphthalene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2-Methylphenol	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
2-Nitroaniline	ND *+		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
2-Nitrophenol	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
3,3'-Dichlorobenzidine	ND		39	ug/L	05/11/21 16:54	05/13/21 20:17		1
3-Methylphenol + 4-Methylphenol	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
3-Nitroaniline	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
4,6-Dinitro-2-methylphenol	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
4-Bromophenyl phenyl ether	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
4-Chloro-3-methylphenol	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
4-Chloroaniline	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
4-Chlorophenyl phenyl ether	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
4-Nitroaniline	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
4-Nitrophenol	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
Acenaphthene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Acenaphthylene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Aniline	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Anthracene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzidine	ND		39	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzo[a]anthracene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzo[a]pyrene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzo[b]fluoranthene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzo[g,h,i]perylene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzo[k]fluoranthene	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzoic acid	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
Benzyl alcohol	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
bis (2-chloroisopropyl) ether	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Bis(2-chloroethoxy)methane	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Bis(2-chloroethyl)ether	ND		9.7	ug/L	05/11/21 16:54	05/13/21 20:17		1
Bis(2-ethylhexyl) phthalate	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1
Butyl benzyl phthalate	ND		19	ug/L	05/11/21 16:54	05/13/21 20:17		1

Eurofins Calscience Irvine

# Client Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Client Sample ID: Grab

Date Collected: 05/06/21 07:05  
 Date Received: 05/06/21 12:45

## Lab Sample ID: 440-282833-2

Matrix: Water

### Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Dibenz(a,h)anthracene	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
Dibenzofuran	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Diethyl phthalate	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Dimethyl phthalate	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Di-n-butyl phthalate	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
Di-n-octyl phthalate	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
Fluoranthene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Fluorene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Hexachlorobenzene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Hexachlorobutadiene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Hexachlorocyclopentadiene	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
Hexachloroethane	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Indeno[1,2,3-cd]pyrene	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
Isophorone	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Naphthalene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Nitrobenzene	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
N-Nitrosodimethylamine	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
N-Nitrosodi-n-propylamine	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
N-Nitrosodiphenylamine	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Pentachlorophenol	ND		19	ug/L		05/11/21 16:54	05/13/21 20:17	1
Phenanthrene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Phenol	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1
Pyrene	ND		9.7	ug/L		05/11/21 16:54	05/13/21 20:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	87		40 - 120	05/11/21 16:54	05/13/21 20:17	1
2-Fluorobiphenyl	91		50 - 120	05/11/21 16:54	05/13/21 20:17	1
2-Fluorophenol (Surr)	77		30 - 120	05/11/21 16:54	05/13/21 20:17	1
Nitrobenzene-d5 (Surr)	94		45 - 120	05/11/21 16:54	05/13/21 20:17	1
Phenol-d6 (Surr)	86		35 - 120	05/11/21 16:54	05/13/21 20:17	1
Terphenyl-d14 (Surr)	86		10 - 150	05/11/21 16:54	05/13/21 20:17	1

### General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.3	HF	0.1	SU			05/07/21 10:26	1

### General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Dissolved	ND	HF	0.050	mg/L		05/07/21 16:10	05/07/21 17:02	1

### Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	8.29			SU			05/06/21 07:05	1
Field Temperature	17.40			Celsius			05/06/21 07:05	1

# Surrogate Summary

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-130)	BFB (80-120)	DBFM (76-132)	TOL (80-128)
440-282833-2 - RA	Grab	102	101	98	101
440-282833-2	Grab	101	100	100	105
440-282833-2	Grab	100	103	98	104
440-282833-2 MS	Grab	97	101	99	101
440-282833-2 MSD	Grab	94	102	97	103
440-283076-B-1 MS	Matrix Spike	104	100	99	98
440-283076-B-1 MSD	Matrix Spike Duplicate	99	98	99	100
LCS 440-646503/1002	Lab Control Sample	96	97	98	96
LCS 440-646505/1002	Lab Control Sample	95	103	96	99
LCS 440-646505/1003	Lab Control Sample	101	102	99	104
MB 440-646503/4	Method Blank	100	101	101	102
MB 440-646505/4	Method Blank	106	101	101	100

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (40-120)	FBD (50-120)	2FP (30-120)	NBZ (45-120)	PHL6 (35-120)	TPHL (10-150)
440-282833-2	Grab	87	91	77	94	86	86
LCS 440-646376/2-A	Lab Control Sample	99	91	85	98	95	95
LCSD 440-646376/3-A	Lab Control Sample Dup	102	92	85	98	95	94
MB 440-646376/1-A	Method Blank	84	92	75	92	84	91

### Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBD = 2-Fluorobiphenyl

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL6 = Phenol-d6 (Surr)

TPHL = Terphenyl-d14 (Surr)

## Method: 8270C SIM - 1,4 Dioxane by SIM

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DXE (27-120)			
440-282833-2	Grab	55			
LCS 440-646203/3-A	Lab Control Sample	60			
LCSD 440-646203/4-A	Lab Control Sample Dup	46			
MB 440-646203/1-A	Method Blank	50			

### Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

## Method Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	1,4 Dioxane by SIM	SW846	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
SM 4500 H+ B	pH	SM	TAL IRV
SM 4500 S2 D	Sulfide, Total	SM	TAL IRV
SM 5220D	COD	SM	TAL IRV
Field Sampling	Field Sampling	EPA	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV
SM 4500 S2 B	Sulfide, Separation of Soluble and Insoluble	SM	TAL IRV

### Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

# Lab Chronicle

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Client Sample ID: Composite

Date Collected: 05/06/21 07:00

Date Received: 05/06/21 12:45

## Lab Sample ID: 440-282833-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	646155	05/10/21 10:18	VY3D	TAL IRV
Total/NA	Analysis	SM 5220D		1	2 mL	2 mL	646749	05/14/21 14:38	PN8W	TAL IRV

## Client Sample ID: Grab

Date Collected: 05/06/21 07:05

Date Received: 05/06/21 12:45

## Lab Sample ID: 440-282833-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	646505	05/12/21 21:49	K6MO	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	646505	05/12/21 23:09	K6MO	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	646503	05/12/21 23:36	K6MO	TAL IRV
Total/NA	Prep	3520C			1035 mL	2 mL	646376	05/11/21 16:54	AR4F	TAL IRV
Total/NA	Analysis	8270C		1			646607	05/13/21 20:17	AR4F	TAL IRV
Total/NA	Prep	3520C			1035 mL	1 mL	646203	05/10/21 15:25	AR4F	TAL IRV
Total/NA	Analysis	8270C SIM		1			646743	05/14/21 16:35	AR4F	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1			646099	05/07/21 10:26	YO8L	TAL IRV
Dissolved	Prep	SM 4500 S2 B			7.5 mL	7.5 mL	646056	05/07/21 16:10	GG0B	TAL IRV
Dissolved	Analysis	SM 4500 S2 D		1			646062	05/07/21 17:02	GG0B	TAL IRV
Total/NA	Analysis	Field Sampling		1			646219	05/06/21 07:05	P1R	TAL IRV

### Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-646503/4**

**Matrix: Water**

**Analysis Batch: 646503**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloroethyl vinyl ether	ND		2.0	ug/L			05/12/21 21:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		05/12/21 21:02	1
4-Bromofluorobenzene (Surr)	101		80 - 120		05/12/21 21:02	1
Dibromofluoromethane (Surr)	101		76 - 132		05/12/21 21:02	1
Toluene-d8 (Surr)	102		80 - 128		05/12/21 21:02	1

**Lab Sample ID: LCS 440-646503/1002**

**Matrix: Water**

**Analysis Batch: 646503**

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
2-Chloroethyl vinyl ether		25.0	25.1		ug/L		101	37 - 150
Surrogate	%Recovery	Qualifier	Limits					
1,2-Dichloroethane-d4 (Surr)	96		70 - 130					
4-Bromofluorobenzene (Surr)	97		80 - 120					
Dibromofluoromethane (Surr)	98		76 - 132					
Toluene-d8 (Surr)	96		80 - 128					

**Lab Sample ID: 440-283076-B-1 MS**

**Matrix: Water**

**Analysis Batch: 646503**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.
2-Chloroethyl vinyl ether	ND		10.0	10.1		ug/L		101	10 - 140
Surrogate	%Recovery	Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	104		70 - 130						
4-Bromofluorobenzene (Surr)	100		80 - 120						
Dibromofluoromethane (Surr)	99		76 - 132						
Toluene-d8 (Surr)	98		80 - 128						

**Lab Sample ID: 440-283076-B-1 MSD**

**Matrix: Water**

**Analysis Batch: 646503**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.	RPD
2-Chloroethyl vinyl ether	ND		10.0	10.3		ug/L		103	10 - 140	35
Surrogate	%Recovery	Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)	99		70 - 130							
4-Bromofluorobenzene (Surr)	98		80 - 120							
Dibromofluoromethane (Surr)	99		76 - 132							
Toluene-d8 (Surr)	100		80 - 128							

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-646505/4**

**Matrix: Water**

**Analysis Batch: 646505**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			05/12/21 21:22	1
1,1,1-Trichloroethane	ND		1.0	ug/L			05/12/21 21:22	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			05/12/21 21:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			05/12/21 21:22	1
Acrolein	ND		5.0	ug/L			05/12/21 21:22	1
1,1,2-Trichloroethane	ND		1.0	ug/L			05/12/21 21:22	1
Acrylonitrile	ND		2.0	ug/L			05/12/21 21:22	1
1,1-Dichloroethane	ND		1.0	ug/L			05/12/21 21:22	1
1,1-Dichloroethene	ND		1.0	ug/L			05/12/21 21:22	1
1,1-Dichloropropene	ND		1.0	ug/L			05/12/21 21:22	1
Total Volatile Organic Compounds	ND		150	ug/L			05/12/21 21:22	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			05/12/21 21:22	1
1,2,3-Trichloropropane	ND		1.0	ug/L			05/12/21 21:22	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			05/12/21 21:22	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			05/12/21 21:22	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			05/12/21 21:22	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			05/12/21 21:22	1
1,2-Dichlorobenzene	ND		1.0	ug/L			05/12/21 21:22	1
1,2-Dichloroethane	ND		1.0	ug/L			05/12/21 21:22	1
1,2-Dichloropropane	ND		1.0	ug/L			05/12/21 21:22	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			05/12/21 21:22	1
1,3-Dichlorobenzene	ND		1.0	ug/L			05/12/21 21:22	1
1,3-Dichloropropane	ND		1.0	ug/L			05/12/21 21:22	1
1,4-Dichlorobenzene	ND		1.0	ug/L			05/12/21 21:22	1
2,2-Dichloropropane	ND		1.0	ug/L			05/12/21 21:22	1
2-Chlorotoluene	ND		1.0	ug/L			05/12/21 21:22	1
4-Chlorotoluene	ND		1.0	ug/L			05/12/21 21:22	1
Acetone	ND		10	ug/L			05/12/21 21:22	1
Benzene	ND		0.50	ug/L			05/12/21 21:22	1
Bromobenzene	ND		1.0	ug/L			05/12/21 21:22	1
Bromochloromethane	ND		1.0	ug/L			05/12/21 21:22	1
Bromodichloromethane	ND		1.0	ug/L			05/12/21 21:22	1
Bromoform	ND		1.0	ug/L			05/12/21 21:22	1
Bromomethane	ND		1.0	ug/L			05/12/21 21:22	1
Carbon tetrachloride	ND		0.50	ug/L			05/12/21 21:22	1
Chlorobenzene	ND		1.0	ug/L			05/12/21 21:22	1
Chloroethane	ND		1.0	ug/L			05/12/21 21:22	1
Chloroform	ND		1.0	ug/L			05/12/21 21:22	1
Chloromethane	ND		1.0	ug/L			05/12/21 21:22	1
cis-1,2-Dichloroethene	ND		1.0	ug/L			05/12/21 21:22	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			05/12/21 21:22	1
Dibromochloromethane	ND		1.0	ug/L			05/12/21 21:22	1
Dibromomethane	ND		1.0	ug/L			05/12/21 21:22	1
Dichlorodifluoromethane	ND		1.0	ug/L			05/12/21 21:22	1
Ethylbenzene	ND		1.0	ug/L			05/12/21 21:22	1
Hexachlorobutadiene	ND		1.0	ug/L			05/12/21 21:22	1
Isopropyl alcohol	ND		250	ug/L			05/12/21 21:22	1
Isopropylbenzene	ND		1.0	ug/L			05/12/21 21:22	1

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-646505/4**

**Matrix: Water**

**Analysis Batch: 646505**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifer								
m,p-Xylene	ND				1.0	ug/L			05/12/21 21:22	1
Methylene Chloride	ND				5.0	ug/L			05/12/21 21:22	1
Methyl-t-Butyl Ether (MTBE)	ND				1.0	ug/L			05/12/21 21:22	1
Naphthalene	ND				1.0	ug/L			05/12/21 21:22	1
n-Butylbenzene	ND				1.0	ug/L			05/12/21 21:22	1
N-Propylbenzene	ND				1.0	ug/L			05/12/21 21:22	1
o-Xylene	ND				1.0	ug/L			05/12/21 21:22	1
p-Isopropyltoluene	ND				1.0	ug/L			05/12/21 21:22	1
sec-Butylbenzene	ND				1.0	ug/L			05/12/21 21:22	1
Styrene	ND				1.0	ug/L			05/12/21 21:22	1
tert-Butylbenzene	ND				1.0	ug/L			05/12/21 21:22	1
Tetrachloroethene	ND				1.0	ug/L			05/12/21 21:22	1
Toluene	ND				1.0	ug/L			05/12/21 21:22	1
trans-1,2-Dichloroethene	ND				1.0	ug/L			05/12/21 21:22	1
trans-1,3-Dichloropropene	ND				0.50	ug/L			05/12/21 21:22	1
Trichloroethene	ND				1.0	ug/L			05/12/21 21:22	1
Trichlorofluoromethane	ND				1.0	ug/L			05/12/21 21:22	1
Vinyl chloride	ND				0.50	ug/L			05/12/21 21:22	1

**MB MB**

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifer						
1,2-Dichloroethane-d4 (Surr)	106				70 - 130			1
4-Bromofluorobenzene (Surr)	101				80 - 120			1
Dibromofluoromethane (Surr)	101				76 - 132			1
Toluene-d8 (Surr)	100				80 - 128			1

**Lab Sample ID: LCS 440-646505/1002**

**Matrix: Water**

**Analysis Batch: 646505**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	Result	Qualifier	Unit	D	%Rec	Limits	%Rec.
	Added	Result	Qualifier							
1,1,1,2-Tetrachloroethane	25.0	24.5				ug/L		98	60 - 141	
1,1,1-Trichloroethane	25.0	25.4				ug/L		102	70 - 130	
1,1,2,2-Tetrachloroethane	25.0	25.3				ug/L		101	63 - 130	
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	26.4				ug/L		105	60 - 140	
Acrolein	24.7	23.9				ug/L		97	10 - 145	
1,1,2-Trichloroethane	25.0	24.4				ug/L		98	70 - 130	
Acrylonitrile	250	239				ug/L		95	48 - 140	
1,1-Dichloroethane	25.0	25.0				ug/L		100	64 - 130	
1,1-Dichloroethene	25.0	25.6				ug/L		103	70 - 130	
1,1-Dichloropropene	25.0	26.0				ug/L		104	70 - 130	
Total Volatile Organic Compounds	5370	5300				ug/L		99		
1,2,3-Trichlorobenzene	25.0	22.3				ug/L		89	60 - 140	
1,2,3-Trichloropropane	25.0	26.6				ug/L		107	63 - 130	
1,2,4-Trichlorobenzene	25.0	23.0				ug/L		92	60 - 140	
1,2,4-Trimethylbenzene	25.0	26.7				ug/L		107	70 - 135	
1,2-Dibromo-3-Chloropropane	25.0	23.6				ug/L		94	52 - 140	
1,2-Dibromoethane (EDB)	25.0	24.5				ug/L		98	70 - 130	
1,2-Dichlorobenzene	25.0	24.6				ug/L		98	70 - 130	

Eurofins Calscience Irvine

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-646505/1002**

**Matrix: Water**

**Analysis Batch: 646505**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	25.0	23.4		ug/L	94	57 - 138	
1,2-Dichloropropane	25.0	24.1		ug/L	96	67 - 130	
1,3,5-Trimethylbenzene	25.0	26.9		ug/L	108	70 - 136	
1,3-Dichlorobenzene	25.0	25.8		ug/L	103	70 - 130	
1,3-Dichloropropane	25.0	24.3		ug/L	97	70 - 130	
1,4-Dichlorobenzene	25.0	25.0		ug/L	100	70 - 130	
2,2-Dichloropropane	25.0	27.4		ug/L	109	68 - 141	
2-Chlorotoluene	25.0	26.3		ug/L	105	70 - 130	
4-Chlorotoluene	25.0	26.2		ug/L	105	70 - 130	
Acetone	125	120		ug/L	96	10 - 150	
Benzene	25.0	24.7		ug/L	99	68 - 130	
Bromobenzene	25.0	25.8		ug/L	103	70 - 130	
Bromochloromethane	25.0	25.6		ug/L	102	70 - 130	
Bromodichloromethane	25.0	25.1		ug/L	101	70 - 132	
Bromoform	25.0	26.6		ug/L	106	60 - 148	
Bromomethane	25.0	25.1		ug/L	100	64 - 139	
Carbon tetrachloride	25.0	26.2		ug/L	105	60 - 150	
Chlorobenzene	25.0	24.2		ug/L	97	70 - 130	
Chloroethane	25.0	24.9		ug/L	100	64 - 135	
Chloroform	25.0	23.7		ug/L	95	70 - 130	
Chloromethane	25.0	24.8		ug/L	99	47 - 140	
cis-1,2-Dichloroethene	25.0	25.0		ug/L	100	70 - 133	
cis-1,3-Dichloropropene	25.0	25.6		ug/L	102	70 - 133	
Dibromochloromethane	25.0	25.1		ug/L	100	69 - 145	
Dibromomethane	25.0	25.1		ug/L	100	70 - 130	
Dichlorodifluoromethane	25.0	28.0		ug/L	112	29 - 150	
Ethylbenzene	25.0	25.0		ug/L	100	70 - 130	
Hexachlorobutadiene	25.0	24.2		ug/L	97	10 - 150	
Isopropylbenzene	25.0	25.7		ug/L	103	70 - 136	
m,p-Xylene	25.0	25.4		ug/L	101	70 - 130	
Methylene Chloride	25.0	23.9		ug/L	95	52 - 130	
Methyl-t-Butyl Ether (MTBE)	25.0	24.5		ug/L	98	63 - 131	
Naphthalene	25.0	21.8		ug/L	87	60 - 140	
n-Butylbenzene	25.0	27.9		ug/L	112	65 - 150	
N-Propylbenzene	25.0	27.3		ug/L	109	67 - 139	
o-Xylene	25.0	25.3		ug/L	101	70 - 130	
p-Isopropyltoluene	25.0	27.2		ug/L	109	70 - 132	
sec-Butylbenzene	25.0	27.4		ug/L	110	70 - 138	
Styrene	25.0	25.0		ug/L	100	70 - 134	
tert-Butylbenzene	25.0	26.9		ug/L	108	70 - 130	
Tetrachloroethene	25.0	25.0		ug/L	100	70 - 130	
Toluene	25.0	24.2		ug/L	97	70 - 130	
trans-1,2-Dichloroethene	25.0	25.5		ug/L	102	70 - 130	
trans-1,3-Dichloropropene	25.0	25.9		ug/L	104	70 - 132	
Trichloroethene	25.0	24.6		ug/L	98	70 - 130	
Trichlorofluoromethane	25.0	27.1		ug/L	109	60 - 150	
Vinyl chloride	25.0	26.9		ug/L	108	59 - 133	

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-646505/1002**

**Matrix: Water**

**Analysis Batch: 646505**

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95				70 - 130
4-Bromofluorobenzene (Surr)	103				80 - 120
Dibromofluoromethane (Surr)	96				76 - 132
Toluene-d8 (Surr)	99				80 - 128

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

**Lab Sample ID: LCS 440-646505/1003**

**Matrix: Water**

**Analysis Batch: 646505**

Analyte	Spike	LCS	LCS	%Rec.			
	Added	Result	Qualifier	Unit	D	%Rec	Limits
Total Volatile Organic Compounds	1630	1730		ug/L		106	
Isopropyl alcohol	250	276		ug/L		111	49 - 142

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101				70 - 130
4-Bromofluorobenzene (Surr)	102				80 - 120
Dibromofluoromethane (Surr)	99				76 - 132
Toluene-d8 (Surr)	104				80 - 128

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

**Lab Sample ID: 440-282833-2 MS**

**Matrix: Water**

**Analysis Batch: 646505**

Analyte	Sample	Sample	Spike	MS		%Rec.			
	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	ND		10.0	9.61		ug/L		96	60 - 149
1,1,1-Trichloroethane	ND		10.0	10.0		ug/L		100	70 - 130
1,1,2,2-Tetrachloroethane	ND		10.0	10.6		ug/L		106	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	11.3		ug/L		113	60 - 140
Acrolein	ND		9.88	6.68		ug/L		68	10 - 147
1,1,2-Trichloroethane	ND		10.0	9.71		ug/L		97	70 - 130
Acrylonitrile	ND		100	96.0		ug/L		96	38 - 144
1,1-Dichloroethane	ND		10.0	9.60		ug/L		96	65 - 130
1,1-Dichloroethene	ND		10.0	10.6		ug/L		106	70 - 130
1,1-Dichloropropene	ND		10.0	10.6		ug/L		106	64 - 130
Total Volatile Organic Compounds	ND		3770	3700		ug/L		98	
1,2,3-Trichlorobenzene	ND		10.0	9.58		ug/L		96	60 - 140
1,2,3-Trichloropropane	ND		10.0	11.0		ug/L		110	60 - 130
1,2,4-Trichlorobenzene	ND		10.0	9.53		ug/L		95	60 - 140
1,2,4-Trimethylbenzene	ND		10.0	10.7		ug/L		107	70 - 130
1,2-Dibromo-3-Chloropropane	ND		10.0	10.8		ug/L		108	48 - 140
1,2-Dibromoethane (EDB)	ND		10.0	9.82		ug/L		98	70 - 131
1,2-Dichlorobenzene	ND		10.0	9.88		ug/L		99	70 - 130
1,2-Dichloroethane	ND		10.0	9.06		ug/L		91	56 - 146
1,2-Dichloropropane	ND		10.0	9.35		ug/L		94	69 - 130
1,3,5-Trimethylbenzene	ND		10.0	10.6		ug/L		106	70 - 130
1,3-Dichlorobenzene	ND		10.0	9.91		ug/L		99	70 - 130
1,3-Dichloropropane	ND		10.0	9.61		ug/L		96	70 - 130

**Client Sample ID: Grab**  
**Prep Type: Total/NA**

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-282833-2 MS**

**Matrix: Water**

**Analysis Batch: 646505**

**Client Sample ID: Grab**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,4-Dichlorobenzene	ND		10.0	9.82		ug/L	98	70 - 130	
2,2-Dichloropropane	ND		10.0	10.3		ug/L	103	69 - 138	
2-Chlorotoluene	ND		10.0	10.1		ug/L	101	70 - 130	
4-Chlorotoluene	ND		10.0	10.1		ug/L	101	70 - 130	
Acetone	ND		50.0	52.3		ug/L	105	10 - 150	
Benzene	ND		10.0	9.60		ug/L	96	66 - 130	
Bromobenzene	ND		10.0	9.83		ug/L	98	70 - 130	
Bromochloromethane	ND		10.0	9.65		ug/L	96	70 - 130	
Bromodichloromethane	ND		10.0	9.70		ug/L	97	70 - 138	
Bromoform	ND		10.0	10.7		ug/L	107	59 - 150	
Bromomethane	ND		10.0	10.1		ug/L	101	62 - 131	
Carbon tetrachloride	ND		10.0	10.6		ug/L	106	60 - 150	
Chlorobenzene	ND		10.0	9.72		ug/L	97	70 - 130	
Chloroethane	ND		10.0	11.5		ug/L	115	68 - 130	
Chloroform	ND		10.0	9.32		ug/L	93	70 - 130	
Chloromethane	ND		10.0	9.71		ug/L	97	39 - 144	
cis-1,2-Dichloroethene	ND		10.0	9.63		ug/L	96	70 - 130	
cis-1,3-Dichloropropene	ND		10.0	9.71		ug/L	97	70 - 133	
Dibromochloromethane	ND		10.0	9.88		ug/L	99	70 - 148	
Dibromomethane	ND		10.0	9.77		ug/L	98	70 - 130	
Dichlorodifluoromethane	ND		10.0	11.8		ug/L	118	25 - 142	
Ethylbenzene	ND		10.0	10.2		ug/L	102	70 - 130	
Hexachlorobutadiene	ND		10.0	10.1		ug/L	101	10 - 150	
Isopropyl alcohol	ND		250	254		ug/L	102	46 - 142	
Isopropylbenzene	ND		10.0	10.4		ug/L	104	70 - 132	
m,p-Xylene	ND		10.0	10.2		ug/L	102	70 - 133	
Methylene Chloride	ND		10.0	9.03		ug/L	90	52 - 130	
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.43		ug/L	94	70 - 130	
Naphthalene	ND		10.0	9.35		ug/L	93	60 - 140	
n-Butylbenzene	ND		10.0	11.0		ug/L	110	61 - 149	
N-Propylbenzene	ND		10.0	10.6		ug/L	106	66 - 135	
o-Xylene	ND		10.0	10.0		ug/L	100	70 - 133	
p-Isopropyltoluene	ND		10.0	10.8		ug/L	108	70 - 130	
sec-Butylbenzene	ND		10.0	10.8		ug/L	108	67 - 134	
Styrene	ND		10.0	9.52		ug/L	95	29 - 150	
tert-Butylbenzene	ND		10.0	10.8		ug/L	108	70 - 130	
Tetrachloroethene	ND		10.0	10.9		ug/L	109	70 - 137	
Toluene	ND		10.0	9.80		ug/L	98	70 - 130	
trans-1,2-Dichloroethene	ND		10.0	10.1		ug/L	101	70 - 130	
trans-1,3-Dichloropropene	ND		10.0	9.99		ug/L	100	70 - 138	
Trichloroethene	ND		10.0	9.99		ug/L	100	70 - 130	
Trichlorofluoromethane	ND		10.0	11.4		ug/L	114	60 - 150	
Vinyl chloride	ND		10.0	11.2		ug/L	112	50 - 137	

**MS**   **MS**

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-282833-2 MS**

**Matrix: Water**

**Analysis Batch: 646505**

**Client Sample ID: Grab**  
**Prep Type: Total/NA**

Surrogate	MS	MS
	%Recovery	Qualifier
Toluene-d8 (Surr)	101	80 - 128

**Lab Sample ID: 440-282833-2 MSD**

**Matrix: Water**

**Analysis Batch: 646505**

**Client Sample ID: Grab**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	Limit
1,1,1,2-Tetrachloroethane	ND		10.0	10.1		ug/L	101	60 - 149	5	20
1,1,1-Trichloroethane	ND		10.0	9.93		ug/L	99	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		10.0	11.3		ug/L	113	63 - 130	6	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	10.4		ug/L	104	60 - 140	9	20
Acrolein	ND		9.88	6.94		ug/L	70	10 - 147	4	40
1,1,2-Trichloroethane	ND		10.0	10.2		ug/L	102	70 - 130	5	25
Acrylonitrile	ND		100	98.8		ug/L	99	38 - 144	3	40
1,1-Dichloroethane	ND		10.0	9.56		ug/L	96	65 - 130	0	20
1,1-Dichloroethene	ND		10.0	10.1		ug/L	101	70 - 130	5	20
1,1-Dichloropropene	ND		10.0	10.2		ug/L	102	64 - 130	3	20
Total Volatile Organic Compounds	ND		3770	3970		ug/L	105		7	
1,2,3-Trichlorobenzene	ND		10.0	9.83		ug/L	98	60 - 140	3	20
1,2,3-Trichloropropane	ND		10.0	11.4		ug/L	114	60 - 130	4	30
1,2,4-Trichlorobenzene	ND		10.0	9.81		ug/L	98	60 - 140	3	20
1,2,4-Trimethylbenzene	ND		10.0	11.0		ug/L	110	70 - 130	3	25
1,2-Dibromo-3-Chloropropane	ND		10.0	10.9		ug/L	109	48 - 140	1	30
1,2-Dibromoethane (EDB)	ND		10.0	10.3		ug/L	103	70 - 131	5	25
1,2-Dichlorobenzene	ND		10.0	10.2		ug/L	102	70 - 130	4	20
1,2-Dichloroethane	ND		10.0	9.47		ug/L	95	56 - 146	4	20
1,2-Dichloropropane	ND		10.0	9.42		ug/L	94	69 - 130	1	20
1,3,5-Trimethylbenzene	ND		10.0	10.8		ug/L	108	70 - 130	2	20
1,3-Dichlorobenzene	ND		10.0	10.2		ug/L	102	70 - 130	3	20
1,3-Dichloropropane	ND		10.0	10.1		ug/L	101	70 - 130	5	25
1,4-Dichlorobenzene	ND		10.0	10.2		ug/L	102	70 - 130	4	20
2,2-Dichloropropane	ND		10.0	10.6		ug/L	106	69 - 138	3	25
2-Chlorotoluene	ND		10.0	10.4		ug/L	104	70 - 130	3	20
4-Chlorotoluene	ND		10.0	10.3		ug/L	103	70 - 130	2	20
Acetone	ND		50.0	54.9		ug/L	110	10 - 150	5	35
Benzene	ND		10.0	9.90		ug/L	99	66 - 130	3	20
Bromobenzene	ND		10.0	10.4		ug/L	104	70 - 130	6	20
Bromochloromethane	ND		10.0	10.1		ug/L	101	70 - 130	5	25
Bromodichloromethane	ND		10.0	9.86		ug/L	99	70 - 138	2	20
Bromoform	ND		10.0	11.4		ug/L	114	59 - 150	6	25
Bromomethane	ND		10.0	9.83		ug/L	98	62 - 131	3	25
Carbon tetrachloride	ND		10.0	10.2		ug/L	102	60 - 150	4	25
Chlorobenzene	ND		10.0	10.2		ug/L	102	70 - 130	5	20
Chloroethane	ND		10.0	10.5		ug/L	105	68 - 130	9	25
Chloroform	ND		10.0	9.49		ug/L	95	70 - 130	2	20
Chloromethane	ND		10.0	9.81		ug/L	98	39 - 144	1	25
cis-1,2-Dichloroethene	ND		10.0	9.93		ug/L	99	70 - 130	3	20
cis-1,3-Dichloropropene	ND		10.0	10.3		ug/L	103	70 - 133	6	20

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-282833-2 MSD				Client Sample ID: Grab Prep Type: Total/NA						
Matrix: Water										
Analysis Batch: 646505										
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD Limit	RPD Limit
Dibromochloromethane	ND		10.0	10.4		ug/L	104	70 - 148	5	25
Dibromomethane	ND		10.0	10.2		ug/L	102	70 - 130	4	25
Dichlorodifluoromethane	ND		10.0	11.3		ug/L	113	25 - 142	4	30
Ethylbenzene	ND		10.0	10.3		ug/L	103	70 - 130	1	20
Hexachlorobutadiene	ND		10.0	10.0		ug/L	100	10 - 150	1	20
Isopropyl alcohol	ND		250	303		ug/L	121	46 - 142	18	40
Isopropylbenzene	ND		10.0	10.5		ug/L	105	70 - 132	1	20
m,p-Xylene	ND		10.0	10.3		ug/L	103	70 - 133	1	25
Methylene Chloride	ND		10.0	9.52		ug/L	95	52 - 130	5	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.66		ug/L	97	70 - 130	2	25
Naphthalene	ND		10.0	9.77		ug/L	98	60 - 140	4	30
n-Butylbenzene	ND		10.0	11.0		ug/L	110	61 - 149	0	20
N-Propylbenzene	ND		10.0	10.8		ug/L	108	66 - 135	2	20
o-Xylene	ND		10.0	10.5		ug/L	105	70 - 133	5	20
p-Isopropyltoluene	ND		10.0	10.9		ug/L	109	70 - 130	1	20
sec-Butylbenzene	ND		10.0	11.0		ug/L	110	67 - 134	2	20
Styrene	ND		10.0	9.97		ug/L	100	29 - 150	5	35
tert-Butylbenzene	ND		10.0	11.0		ug/L	110	70 - 130	1	20
Tetrachloroethene	ND		10.0	10.9		ug/L	109	70 - 137	0	20
Toluene	ND		10.0	9.96		ug/L	100	70 - 130	2	20
trans-1,2-Dichloroethene	ND		10.0	10.2		ug/L	102	70 - 130	2	20
trans-1,3-Dichloropropene	ND		10.0	10.5		ug/L	105	70 - 138	5	25
Trichloroethene	ND		10.0	9.68		ug/L	97	70 - 130	3	20
Trichlorofluoromethane	ND		10.0	10.7		ug/L	107	60 - 150	6	25
Vinyl chloride	ND		10.0	10.6		ug/L	106	50 - 137	6	30
Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits							
1,2-Dichloroethane-d4 (Surr)	94		70 - 130							
4-Bromofluorobenzene (Surr)	102		80 - 120							
Dibromofluoromethane (Surr)	97		76 - 132							
Toluene-d8 (Surr)	103		80 - 128							

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-646376/1-A				Client Sample ID: Method Blank Prep Type: Total/NA						
Matrix: Water				Prep Batch: 646376						
Analysis Batch: 646607										
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
1,2,4-Trichlorobenzene	ND		10	ug/L	05/11/21 16:54	05/13/21 19:03		1		
1,2-Dichlorobenzene	ND		10	ug/L	05/11/21 16:54	05/13/21 19:03		1		
1,2-Diphenylhydrazine(as Azobenzene)	ND		20	ug/L	05/11/21 16:54	05/13/21 19:03		1		
1,3-Dichlorobenzene	ND		10	ug/L	05/11/21 16:54	05/13/21 19:03		1		
1,4-Dichlorobenzene	ND		10	ug/L	05/11/21 16:54	05/13/21 19:03		1		
2,4,5-Trichlorophenol	ND		20	ug/L	05/11/21 16:54	05/13/21 19:03		1		
2,4,6-Trichlorophenol	ND		20	ug/L	05/11/21 16:54	05/13/21 19:03		1		
2,4-Dichlorophenol	ND		10	ug/L	05/11/21 16:54	05/13/21 19:03		1		
2,4-Dimethylphenol	ND		20	ug/L	05/11/21 16:54	05/13/21 19:03		1		

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** MB 440-646376/1-A

**Matrix:** Water

**Analysis Batch:** 646607

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 646376

Analyte	MB	MB	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol		ND			40	ug/L	05/11/21 16:54	05/13/21 19:03		1
2,4-Dinitrotoluene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
2,6-Dinitrotoluene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
2-Chloronaphthalene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
2-Chlorophenol		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
2-Methylnaphthalene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
2-Methylphenol		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
2-Nitroaniline		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
2-Nitrophenol		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
3,3'-Dichlorobenzidine		ND			40	ug/L	05/11/21 16:54	05/13/21 19:03		1
3-Methylphenol + 4-Methylphenol		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
3-Nitroaniline		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
4,6-Dinitro-2-methylphenol		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
4-Bromophenyl phenyl ether		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
4-Chloro-3-methylphenol		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
4-Chloroaniline		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
4-Chlorophenyl phenyl ether		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
4-Nitroaniline		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
4-Nitrophenol		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Acenaphthene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Acenaphthylene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Aniline		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Anthracene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzidine		ND			40	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzo[a]anthracene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzo[a]pyrene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzo[b]fluoranthene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzo[g,h,i]perylene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzo[k]fluoranthene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzoic acid		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Benzyl alcohol		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
bis (2-chloroisopropyl) ether		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Bis(2-chloroethoxy)methane		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Bis(2-chloroethyl)ether		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Bis(2-ethylhexyl) phthalate		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Butyl benzyl phthalate		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Chrysene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Dibenz(a,h)anthracene		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Dibenzofuran		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Diethyl phthalate		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Dimethyl phthalate		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Di-n-butyl phthalate		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Di-n-octyl phthalate		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Fluoranthene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Fluorene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Hexachlorobenzene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Hexachlorobutadiene		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Hexachlorocyclopentadiene		ND			20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Hexachloroethane		ND			10	ug/L	05/11/21 16:54	05/13/21 19:03		1

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-646376/1-A**

**Matrix: Water**

**Analysis Batch: 646607**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 646376**

Analyte	MB	MB	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	ND				20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Isophorone	ND				10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Naphthalene	ND				10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Nitrobenzene	ND				20	ug/L	05/11/21 16:54	05/13/21 19:03		1
N-Nitrosodimethylamine	ND				20	ug/L	05/11/21 16:54	05/13/21 19:03		1
N-Nitrosodi-n-propylamine	ND				10	ug/L	05/11/21 16:54	05/13/21 19:03		1
N-Nitrosodiphenylamine	ND				10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Pentachlorophenol	ND				20	ug/L	05/11/21 16:54	05/13/21 19:03		1
Phenanthrene	ND				10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Phenol	ND				10	ug/L	05/11/21 16:54	05/13/21 19:03		1
Pyrene	ND				10	ug/L	05/11/21 16:54	05/13/21 19:03		1
<b>MB MB</b>		<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>		<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>	
2,4,6-Tribromophenol (Surr)	84				40 - 120		05/11/21 16:54	05/13/21 19:03		1
2-Fluorobiphenyl	92				50 - 120		05/11/21 16:54	05/13/21 19:03		1
2-Fluorophenol (Surr)	75				30 - 120		05/11/21 16:54	05/13/21 19:03		1
Nitrobenzene-d5 (Surr)	92				45 - 120		05/11/21 16:54	05/13/21 19:03		1
Phenol-d6 (Surr)	84				35 - 120		05/11/21 16:54	05/13/21 19:03		1
Terphenyl-d14 (Surr)	91				10 - 150		05/11/21 16:54	05/13/21 19:03		1

**Lab Sample ID: LCS 440-646376/2-A**

**Matrix: Water**

**Analysis Batch: 646607**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 646376**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	%Rec.	
	Added	Result	Qualifier						
1,2,4-Trichlorobenzene	100	79.1		ug/L		79	25 - 84		
1,2-Dichlorobenzene	100	82.1		ug/L		82	24 - 85		
1,2-Diphenylhydrazine(as Azobenzene)	100	104		ug/L		104	44 - 113		
1,3-Dichlorobenzene	100	77.3		ug/L		77	20 - 80		
1,4-Dichlorobenzene	100	81.0		ug/L		81	22 - 81		
2,4,5-Trichlorophenol	100	97.7		ug/L		98	24 - 121		
2,4,6-Trichlorophenol	100	96.1		ug/L		96	20 - 121		
2,4-Dichlorophenol	100	94.1		ug/L		94	23 - 113		
2,4-Dimethylphenol	100	92.5		ug/L		92	39 - 94		
2,4-Dinitrophenol	200	226		ug/L		113	23 - 134		
2,4-Dinitrotoluene	100	117 *+		ug/L		117	54 - 115		
2,6-Dinitrotoluene	100	110		ug/L		110	50 - 115		
2-Chloronaphthalene	100	90.5		ug/L		90	34 - 102		
2-Chlorophenol	100	90.2		ug/L		90	20 - 106		
2-Methylnaphthalene	100	86.5		ug/L		87	34 - 98		
2-Methylphenol	100	101		ug/L		101	36 - 103		
2-Nitroaniline	100	113 *+		ug/L		113	48 - 111		
2-Nitrophenol	100	92.5		ug/L		93	20 - 117		
3,3'-Dichlorobenzidine	100	86.2		ug/L		86	22 - 97		
3-Methylphenol + 4-Methylphenol	100	103		ug/L		103	35 - 106		
3-Nitroaniline	100	103		ug/L		103	51 - 116		
4,6-Dinitro-2-methylphenol	200	220		ug/L		110	28 - 139		
4-Bromophenyl phenyl ether	100	83.4		ug/L		83	42 - 113		

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-646376/2-A**

**Matrix: Water**

**Analysis Batch: 646607**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 646376**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
4-Chloro-3-methylphenol	100	103		ug/L		103	44 - 110	
4-Chloroaniline	100	88.6		ug/L		89	42 - 109	
4-Chlorophenyl phenyl ether	100	91.5		ug/L		91	38 - 115	
4-Nitroaniline	100	113		ug/L		113	50 - 116	
4-Nitrophenol	200	251		ug/L		125	26 - 132	
Acenaphthene	100	92.9		ug/L		93	37 - 107	
Acenaphthylene	100	94.8		ug/L		95	39 - 107	
Aniline	100	96.2		ug/L		96	27 - 115	
Anthracene	100	87.4		ug/L		87	42 - 120	
Benzidine	100	ND		ug/L		19	5 - 150	
Benzo[a]anthracene	100	87.1		ug/L		87	42 - 115	
Benzo[a]pyrene	100	96.1		ug/L		96	41 - 117	
Benzo[b]fluoranthene	100	95.9		ug/L		96	36 - 113	
Benzo[g,h,i]perylene	100	90.9		ug/L		91	37 - 115	
Benzo[k]fluoranthene	100	107		ug/L		107	42 - 122	
Benzoic acid	100	96.5		ug/L		97	15 - 121	
Benzyl alcohol	100	102		ug/L		102	39 - 106	
bis (2-chloroisopropyl) ether	100	101		ug/L		101	38 - 104	
Bis(2-chloroethoxy)methane	100	98.6		ug/L		99	47 - 104	
Bis(2-chloroethyl)ether	100	98.4		ug/L		98	42 - 99	
Bis(2-ethylhexyl) phthalate	100	89.1		ug/L		89	43 - 124	
Butyl benzyl phthalate	100	88.1		ug/L		88	44 - 122	
Chrysene	100	82.7		ug/L		83	42 - 118	
Dibenz(a,h)anthracene	100	92.8		ug/L		93	40 - 114	
Dibenzofuran	100	92.5		ug/L		93	37 - 113	
Diethyl phthalate	100	111		ug/L		111	51 - 120	
Dimethyl phthalate	100	108		ug/L		108	49 - 113	
Di-n-butyl phthalate	100	98.1		ug/L		98	47 - 125	
Di-n-octyl phthalate	100	82.9		ug/L		83	42 - 125	
Fluoranthene	100	96.5		ug/L		96	44 - 119	
Fluorene	100	95.0		ug/L		95	39 - 116	
Hexachlorobenzene	100	82.4		ug/L		82	43 - 112	
Hexachlorobutadiene	100	62.4		ug/L		62	14 - 77	
Hexachlorocyclopentadiene	100	45.9		ug/L		46	10 - 77	
Hexachloroethane	100	70.5		ug/L		71	13 - 75	
Indeno[1,2,3-cd]pyrene	100	115		ug/L		115	35 - 116	
Isophorone	100	104		ug/L		104	48 - 107	
Naphthalene	100	90.6		ug/L		91	33 - 95	
Nitrobenzene	100	98.0		ug/L		98	42 - 99	
N-Nitrosodimethylamine	100	85.2		ug/L		85	35 - 96	
N-Nitrosodi-n-propylamine	100	111		ug/L		111	44 - 111	
N-Nitrosodiphenylamine	100	106		ug/L		106	46 - 116	
Pentachlorophenol	200	199		ug/L		100	26 - 136	
Phenanthrene	100	88.5		ug/L		89	43 - 120	
Phenol	100	96.1		ug/L		96	25 - 99	
Pyrene	100	85.2		ug/L		85	43 - 119	

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-646376/2-A**

**Matrix: Water**

**Analysis Batch: 646607**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 646376**

Surrogate	LCS	LCS	
	%Recovery	Qualifier	Limits
2,4,6-Tribromophenol (Surr)	99		40 - 120
2-Fluorobiphenyl	91		50 - 120
2-Fluorophenol (Surr)	85		30 - 120
Nitrobenzene-d5 (Surr)	98		45 - 120
Phenol-d6 (Surr)	95		35 - 120
Terphenyl-d14 (Surr)	95		10 - 150

**Lab Sample ID: LCSD 440-646376/3-A**

**Matrix: Water**

**Analysis Batch: 646607**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 646376**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
						Limits	Limits	Limit
1,2,4-Trichlorobenzene	100	79.3		ug/L	79	25 - 84	0	35
1,2-Dichlorobenzene	100	84.6		ug/L	85	24 - 85	3	35
1,2-Diphenylhydrazine(as Azobenzene)	100	107		ug/L	107	44 - 113	3	35
1,3-Dichlorobenzene	100	79.4		ug/L	79	20 - 80	3	35
1,4-Dichlorobenzene	100	80.2		ug/L	80	22 - 81	1	35
2,4,5-Trichlorophenol	100	97.8		ug/L	98	24 - 121	0	35
2,4,6-Trichlorophenol	100	95.2		ug/L	95	20 - 121	1	35
2,4-Dichlorophenol	100	94.9		ug/L	95	23 - 113	1	35
2,4-Dimethylphenol	100	94.1		ug/L	94	39 - 94	2	35
2,4-Dinitrophenol	200	230		ug/L	115	23 - 134	2	35
2,4-Dinitrotoluene	100	117 *+		ug/L	117	54 - 115	0	35
2,6-Dinitrotoluene	100	109		ug/L	109	50 - 115	1	35
2-Chloronaphthalene	100	93.4		ug/L	93	34 - 102	3	35
2-Chlorophenol	100	90.5		ug/L	91	20 - 106	0	35
2-Methylnaphthalene	100	88.4		ug/L	88	34 - 98	2	35
2-Methylphenol	100	99.5		ug/L	100	36 - 103	1	35
2-Nitroaniline	100	112 *+		ug/L	112	48 - 111	0	35
2-Nitrophenol	100	92.9		ug/L	93	20 - 117	0	35
3,3'-Dichlorobenzidine	100	85.6		ug/L	86	22 - 97	1	35
3-Methylphenol + 4-Methylphenol	100	103		ug/L	103	35 - 106	1	35
3-Nitroaniline	100	98.3		ug/L	98	51 - 116	4	35
4,6-Dinitro-2-methylphenol	200	220		ug/L	110	28 - 139	0	35
4-Bromophenyl phenyl ether	100	92.4		ug/L	92	42 - 113	10	35
4-Chloro-3-methylphenol	100	104		ug/L	104	44 - 110	1	35
4-Chloroaniline	100	84.3		ug/L	84	42 - 109	5	35
4-Chlorophenyl phenyl ether	100	94.8		ug/L	95	38 - 115	4	35
4-Nitroaniline	100	108		ug/L	108	50 - 116	4	35
4-Nitrophenol	200	246		ug/L	123	26 - 132	2	35
Acenaphthene	100	94.9		ug/L	95	37 - 107	2	35
Acenaphthylene	100	96.2		ug/L	96	39 - 107	1	35
Aniline	100	95.7		ug/L	96	27 - 115	0	35
Anthracene	100	96.4		ug/L	96	42 - 120	10	35
Benzidine	100	26.0 J		ug/L	26	5 - 150	29	35
Benzo[a]anthracene	100	93.7		ug/L	94	42 - 115	7	35
Benzo[a]pyrene	100	107		ug/L	107	41 - 117	11	35
Benzo[b]fluoranthene	100	104		ug/L	104	36 - 113	8	35

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 440-646376/3-A**

**Matrix: Water**

**Analysis Batch: 646607**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 646376**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	RPD Limit
Benzo[g,h,i]perylene	100	102		ug/L	102	37 - 115	11	35	
Benzo[k]fluoranthene	100	115		ug/L	115	42 - 122	7	35	
Benzoic acid	100	99.0		ug/L	99	15 - 121	3	35	
Benzyl alcohol	100	101		ug/L	101	39 - 106	0	35	
bis (2-chloroisopropyl) ether	100	100		ug/L	100	38 - 104	1	35	
Bis(2-chloroethoxy)methane	100	97.3		ug/L	97	47 - 104	1	35	
Bis(2-chloroethyl)ether	100	96.9		ug/L	97	42 - 99	2	35	
Bis(2-ethylhexyl) phthalate	100	97.7		ug/L	98	43 - 124	9	35	
Butyl benzyl phthalate	100	97.5		ug/L	97	44 - 122	10	35	
Chrysene	100	91.7		ug/L	92	42 - 118	10	35	
Dibenz(a,h)anthracene	100	105		ug/L	105	40 - 114	12	35	
Dibenzo furan	100	95.5		ug/L	95	37 - 113	3	35	
Diethyl phthalate	100	109		ug/L	109	51 - 120	1	35	
Dimethyl phthalate	100	107		ug/L	107	49 - 113	1	35	
Di-n-butyl phthalate	100	105		ug/L	105	47 - 125	7	35	
Di-n-octyl phthalate	100	93.4		ug/L	93	42 - 125	12	35	
Fluoranthene	100	104		ug/L	104	44 - 119	8	35	
Fluorene	100	100		ug/L	100	39 - 116	5	35	
Hexachlorobenzene	100	91.5		ug/L	92	43 - 112	10	35	
Hexachlorobutadiene	100	66.4		ug/L	66	14 - 77	6	35	
Hexachlorocyclopentadiene	100	55.2		ug/L	55	10 - 77	18	35	
Hexachloroethane	100	71.8		ug/L	72	13 - 75	2	35	
Indeno[1,2,3-cd]pyrene	100	112		ug/L	112	35 - 116	3	35	
Isophorone	100	104		ug/L	104	48 - 107	0	35	
Naphthalene	100	89.5		ug/L	90	33 - 95	1	35	
Nitrobenzene	100	98.3		ug/L	98	42 - 99	0	35	
N-Nitrosodimethylamine	100	86.4		ug/L	86	35 - 96	1	35	
N-Nitrosodi-n-propylamine	100	107		ug/L	107	44 - 111	4	35	
N-Nitrosodiphenylamine	100	108		ug/L	108	46 - 116	2	35	
Pentachlorophenol	200	210		ug/L	105	26 - 136	5	35	
Phenanthrene	100	96.1		ug/L	96	43 - 120	8	35	
Phenol	100	96.8		ug/L	97	25 - 99	1	35	
Pyrene	100	89.7		ug/L	90	43 - 119	5	35	

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	102		40 - 120
2-Fluorobiphenyl	92		50 - 120
2-Fluorophenol (Surr)	85		30 - 120
Nitrobenzene-d5 (Surr)	98		45 - 120
Phenol-d6 (Surr)	95		35 - 120
Terphenyl-d14 (Surr)	94		10 - 150

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## Method: 8270C SIM - 1,4 Dioxane by SIM

**Lab Sample ID:** MB 440-646203/1-A

**Matrix:** Water

**Analysis Batch:** 646743

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	ug/L		05/10/21 15:25	05/14/21 15:30	1
<b>Surrogate</b>	<b>MB %Recovery</b>	<b>MB Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,4-Dioxane-d8 (Surr)	50		27 - 120			05/10/21 15:25	05/14/21 15:30	1

**Lab Sample ID:** LCS 440-646203/3-A

**Matrix:** Water

**Analysis Batch:** 646743

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	
1,4-Dioxane		2.00	1.15		ug/L		58	36 - 120
<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>LCS Qualifier</b>	<b>Limits</b>					
1,4-Dioxane-d8 (Surr)	60		27 - 120					

**Lab Sample ID:** LCSD 440-646203/4-A

**Matrix:** Water

**Analysis Batch:** 646743

Analyte		Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD
1,4-Dioxane		2.00	0.919		ug/L		46	36 - 120
<b>Surrogate</b>	<b>LCSD %Recovery</b>	<b>LCSD Qualifier</b>	<b>Limits</b>					
1,4-Dioxane-d8 (Surr)	46		27 - 120					

## Method: SM 2540D - Solids, Total Suspended (TSS)

**Lab Sample ID:** MB 440-646155/1

**Matrix:** Water

**Analysis Batch:** 646155

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	mg/L			05/10/21 10:18	1

**Lab Sample ID:** LCS 440-646155/2

**Matrix:** Water

**Analysis Batch:** 646155

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	
Total Suspended Solids		1000	985		mg/L		99	85 - 115

**Lab Sample ID:** 590-15078-B-1 DU

**Matrix:** Water

**Analysis Batch:** 646155

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD
Total Suspended Solids	1900		1870		mg/L		2

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# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## Method: SM 4500 H+ B - pH

**Lab Sample ID:** 440-282874-G-1 DU

**Matrix:** Water

**Analysis Batch:** 646099

**Client Sample ID:** Duplicate  
**Prep Type:** Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.0		8.1		SU		0.5	2

## Method: SM 4500 S2 D - Sulfide, Total

**Lab Sample ID:** MB 440-646056/1-A

**Matrix:** Water

**Analysis Batch:** 646062

**Client Sample ID:** Method Blank  
**Prep Type:** Dissolved  
**Prep Batch:** 646056

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Dissolved	ND		0.050	mg/L		05/07/21 16:10	05/07/21 17:01	1

**Lab Sample ID:** LCS 440-646056/2-A

**Matrix:** Water

**Analysis Batch:** 646062

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Dissolved  
**Prep Batch:** 646056

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Sulfide, Dissolved	0.501	0.496		mg/L		99	80 - 120

**Lab Sample ID:** 440-282874-H-1-B MS

**Matrix:** Water

**Analysis Batch:** 646062

**Client Sample ID:** Matrix Spike  
**Prep Type:** Dissolved  
**Prep Batch:** 646056

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Sulfide, Dissolved	ND	HF	0.501	0.431	HF	mg/L		86	70 - 130

**Lab Sample ID:** 440-282874-H-1-C MSD

**Matrix:** Water

**Analysis Batch:** 646062

**Client Sample ID:** Matrix Spike Duplicate  
**Prep Type:** Dissolved  
**Prep Batch:** 646056

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RDP	RPD Limit
Sulfide, Dissolved	ND	HF	0.501	0.449	HF	mg/L		90	70 - 130	4 30

## Method: SM 5220D - COD

**Lab Sample ID:** MB 440-646749/3

**Matrix:** Water

**Analysis Batch:** 646749

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	mg/L			05/14/21 14:37	1

**Lab Sample ID:** LCS 440-646749/4

**Matrix:** Water

**Analysis Batch:** 646749

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Chemical Oxygen Demand	200	209		mg/L		105	90 - 110

# QC Sample Results

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## Method: SM 5220D - COD (Continued)

**Lab Sample ID: 440-282833-1 MS**

**Matrix: Water**

**Analysis Batch: 646749**

**Client Sample ID: Composite**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits		
Chemical Oxygen Demand	310		200	497		mg/L		96	70 - 120		

**Lab Sample ID: 440-282833-1 MSD**

**Matrix: Water**

**Analysis Batch: 646749**

**Client Sample ID: Composite**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	Limit
Chemical Oxygen Demand	310		200	508		mg/L		101	70 - 120	2	15

**Lab Sample ID: 440-283270-B-1 DU**

**Matrix: Water**

**Analysis Batch: 646749**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	Limit
Chemical Oxygen Demand	88			100		mg/L				13	15

# QC Association Summary

Client: Jacob & Hefner Associates P.C.  
 Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
 SDG: Whittier, CA

## GC/MS VOA

### Analysis Batch: 646503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2 - RA	Grab	Total/NA	Water	8260B	
MB 440-646503/4	Method Blank	Total/NA	Water	8260B	
LCS 440-646503/1002	Lab Control Sample	Total/NA	Water	8260B	
440-283076-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-283076-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 646505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Total/NA	Water	8260B	
440-282833-2	Grab	Total/NA	Water	8260B	
MB 440-646505/4	Method Blank	Total/NA	Water	8260B	
LCS 440-646505/1002	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-646505/1003	Lab Control Sample	Total/NA	Water	8260B	
440-282833-2 MS	Grab	Total/NA	Water	8260B	
440-282833-2 MSD	Grab	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 646203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Total/NA	Water	3520C	
MB 440-646203/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-646203/3-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-646203/4-A	Lab Control Sample Dup	Total/NA	Water	3520C	

### Prep Batch: 646376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Total/NA	Water	3520C	
MB 440-646376/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-646376/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-646376/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

### Analysis Batch: 646607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Total/NA	Water	8270C	
MB 440-646376/1-A	Method Blank	Total/NA	Water	8270C	
LCS 440-646376/2-A	Lab Control Sample	Total/NA	Water	8270C	
LCSD 440-646376/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	

### Analysis Batch: 646743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Total/NA	Water	8270C SIM	
MB 440-646203/1-A	Method Blank	Total/NA	Water	8270C SIM	
LCS 440-646203/3-A	Lab Control Sample	Total/NA	Water	8270C SIM	
LCSD 440-646203/4-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	

## General Chemistry

### Prep Batch: 646056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Dissolved	Water	SM 4500 S2 B	
MB 440-646056/1-A	Method Blank	Dissolved	Water	SM 4500 S2 B	

Eurofins Calscience Irvine

# QC Association Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## General Chemistry (Continued)

### Prep Batch: 646056 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-646056/2-A	Lab Control Sample	Dissolved	Water	SM 4500 S2 B	
440-282874-H-1-B MS	Matrix Spike	Dissolved	Water	SM 4500 S2 B	
440-282874-H-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	SM 4500 S2 B	

### Analysis Batch: 646062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Dissolved	Water	SM 4500 S2 D	
MB 440-646056/1-A	Method Blank	Dissolved	Water	SM 4500 S2 D	
LCS 440-646056/2-A	Lab Control Sample	Dissolved	Water	SM 4500 S2 D	
440-282874-H-1-B MS	Matrix Spike	Dissolved	Water	SM 4500 S2 D	
440-282874-H-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	SM 4500 S2 D	

### Analysis Batch: 646099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Total/NA	Water	SM 4500 H+ B	
440-282874-G-1 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	

### Analysis Batch: 646155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-1	Composite	Total/NA	Water	SM 2540D	
MB 440-646155/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-646155/2	Lab Control Sample	Total/NA	Water	SM 2540D	
590-15078-B-1 DU	Duplicate	Total/NA	Water	SM 2540D	

### Analysis Batch: 646749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-1	Composite	Total/NA	Water	SM 5220D	
MB 440-646749/3	Method Blank	Total/NA	Water	SM 5220D	
LCS 440-646749/4	Lab Control Sample	Total/NA	Water	SM 5220D	
440-282833-1 MS	Composite	Total/NA	Water	SM 5220D	
440-282833-1 MSD	Composite	Total/NA	Water	SM 5220D	
440-283270-B-1 DU	Duplicate	Total/NA	Water	SM 5220D	

## Field Service / Mobile Lab

### Analysis Batch: 646219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-282833-2	Grab	Total/NA	Water	Field Sampling	

# Definitions/Glossary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.  
Project/Site: Omega Chemical Wastewater

Job ID: 440-282833-1  
SDG: Whittier, CA

## Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	1,1-Dichloropropene
8260B		Water	1,2,3-Trichlorobenzene
8260B		Water	1,2,4-Trimethylbenzene
8260B		Water	1,3,5-Trimethylbenzene
8260B		Water	1,3-Dichloropropane
8260B		Water	2,2-Dichloropropane
8260B		Water	2-Chlorotoluene
8260B		Water	Acetone
8260B		Water	Acrolein
8260B		Water	Acrylonitrile
8260B		Water	Isopropyl alcohol
8260B		Water	Isopropylbenzene
8260B		Water	m,p-Xylene
8260B		Water	p-Isopropyltoluene
8260B		Water	Total Volatile Organic Compounds
8270C	3520C	Water	1,2,4-Trichlorobenzene
8270C	3520C	Water	1,2-Diphenylhydrazine(as Azobenzene)
8270C	3520C	Water	2,4,5-Trichlorophenol
8270C	3520C	Water	2,4,6-Trichlorophenol
8270C	3520C	Water	2-Methylnaphthalene
8270C	3520C	Water	2-Methylphenol
8270C	3520C	Water	3-Methylphenol + 4-Methylphenol
8270C	3520C	Water	4,6-Dinitro-2-methylphenol
8270C	3520C	Water	bis (2-chloroisopropyl) ether
8270C	3520C	Water	Hexachlorobenzene
8270C	3520C	Water	Hexachlorobutadiene
8270C	3520C	Water	Hexachlorocyclopentadiene
8270C	3520C	Water	Hexachloroethane
8270C	3520C	Water	Indeno[1,2,3-cd]pyrene
8270C	3520C	Water	Isophorone
8270C	3520C	Water	Phenanthrene
8270C	3520C	Water	Phenol
8270C	3520C	Water	Pyrene
8270C SIM	3520C	Water	1,4-Dioxane
Field Sampling		Water	Field pH
Field Sampling		Water	Field Temperature

**Eurofins Calscience Irvine**

17461 Dorian Ave Suite 100  
Irvine CA 92614-5817  
Phone: 949-261-1022 Fax: 949-260-3297

**Chain of Custody Record**

 eurofins Environment Testing America

<b>Client Information</b>		Sampler	Lab P.M.	Carrier Tracking No(s):	COC No:																		
Client Contact:	Pamela Henriksen	Phone:	F. Rayes	Roberts, Danielle C	440-189746-34724.1																		
Company:	Jacob & Hefner Associates P.C.	PWSID:		E-Mail:	Page: 1 of 1																		
Address:	15375 Barranca Parkway J-101 City: Irvine	Due Date Requested:	Analysis Requested																				
City:		TAT Requested (days):																					
State, Zip:	CA, 92618	Compliance Project:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																				
Phone:	949-453-1045 (Tel) 949-453-1047 (Fax)	PO #:	Omega Chemical Wastewater																				
Email:	phenniksan@jacobandhefner.com	WO #:																					
Project Name:	Omega Chemical Wastewater	Project #:	44003641																				
Site:	California	SSOW#:																					
Sample Identification																							
<table border="1"> <tr> <th>Sample Identification</th> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (C=comp, G=grab)</th> <th>Matrix (W=water, S=solid, O=ocean, A=air)</th> <th>Preservation Code</th> </tr> <tr> <td>Composite</td> <td>5-6-21</td> <td>7:00</td> <td>C</td> <td>Water</td> <td>X X</td> </tr> <tr> <td>Grab</td> <td>5-6-21</td> <td>7:05</td> <td>G</td> <td>Water</td> <td>X X X X</td> </tr> </table>						Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=ocean, A=air)	Preservation Code	Composite	5-6-21	7:00	C	Water	X X	Grab	5-6-21	7:05	G	Water	X X X X
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=ocean, A=air)	Preservation Code																		
Composite	5-6-21	7:00	C	Water	X X																		
Grab	5-6-21	7:05	G	Water	X X X X																		
<table border="1"> <tr> <td><input checked="" type="checkbox"/> Non-Hazard</td> <td><input type="checkbox"/> Flammable</td> <td><input type="checkbox"/> Skin Irritant</td> <td><input type="checkbox"/> Poison B</td> <td><input type="checkbox"/> Unknown</td> <td><input type="checkbox"/> Radiological</td> </tr> </table>						<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Radiological												
<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Radiological																		
Deliverable Requested I, II, III, IV Other (specify)																							
Empty Kit Relinquished by																							
Relinquished by:	Date/Time:		Date:	Time:																			
Relinquished by:	Date/Time:		Received by:	Date/Time:																			
Relinquished by:	Date/Time:		Received by:	Date/Time:																			
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No. <u>21/18/289</u>																					
Other Remarks: <u>Tcp</u>																							
Cooler Temperature(s) °C and Other Remarks:																							
Special Instructions/QC Requirements:																							
Method of Shipment:																							
<input type="checkbox"/> Sample Disposal / A fee may be assessed if samples are retained longer than 1 month		<input type="checkbox"/> Return To Client		<input type="checkbox"/> Disposal By Lab																			
<input type="checkbox"/> Archive For		<input type="checkbox"/> Months																					
    																							
Sampling Time <u>3 hours</u>																							
Field PH - 8.29 <u>Ta = 17.4°C</u>																							
440-282833 Chain of Custody																							

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## Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-282833-1

SDG Number: Whittier, CA

**Login Number:** 282833

**List Source:** Eurofins Calscience Irvine

**List Number:** 1

**Creator:** Escalante, Maria I

### Question

### Answer

### Comment

Radioactivity wasn't checked or is </= background as measured by a survey meter.

The cooler's custody seal, if present, is intact.

Sample custody seals, if present, are intact.

The cooler or samples do not appear to have been compromised or tampered with.

Samples were received on ice.

Cooler Temperature is acceptable.

Cooler Temperature is recorded.

COC is present.

COC is filled out in ink and legible.

COC is filled out with all pertinent information.

Is the Field Sampler's name present on COC?

There are no discrepancies between the containers received and the COC.

Samples are received within Holding Time (excluding tests with immediate HTs)

Sample containers have legible labels.

Containers are not broken or leaking.

Sample collection date/times are provided.

Appropriate sample containers are used.

Sample bottles are completely filled.

Sample Preservation Verified.

There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Multiphasic samples are not present.

Samples do not require splitting or compositing.

Residual Chlorine Checked.

## **ATTACHMENT E**

**PSVP Piezometric and Water Quality Data**

**Attachment E, Table E-1**  
**Piezometric Monitoring Data**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**Second Quarter 2021**

Well No.	Top of Casing Elevation (feet MSL)	Screen Interval (feet MSL)	Date	Depth To Water (feet btoc)	Groundwater Elevation (feet MSL)
EW-1	198.96	111.96 - 126.96	4/13/2021	Dry	Dry
EW-2	197.87	110.87 - 125.87	4/13/2021	83.67	114.20
EW-3	196.78	111.78 - 126.78	4/13/2021	82.41	114.37
EW-4	195.79	109.79 - 124.79	4/13/2021	79.65	116.14
EW-5	194.19	109.19 - 124.19	4/13/2021	78.05	116.14
PZ-1	200.26	112.26 - 132.26	4/13/2021	85.70	114.56
PZ-2	201.48	117.48 - 137.48	4/13/2021	Dry	Dry
PZ-3	203.72	113.92 - 133.92	4/13/2021	88.50	115.22
PZ-4	196.26	106.26 - 126.26	4/13/2021	70.87	125.39
OW1A	212.53	135.03 - 150.03	4/16/2021	Dry	Dry
OW1B	204.98	87.22 - 97.22	4/13/2021	94.45	110.53
OW2	200.1	122.33 - 142.33	4/13/2021	Dry	Dry
OW3A	196.33	115.58 - 135.58	4/13/2021	79.48	116.85
OW3B	195.14	75.38 - 85.38	4/13/2021	95.20	99.94
OW7	212.01	123.39 - 143.39	4/12/2021	Dry	Dry
OW8A	198.42	120.66 - 140.26	4/13/2021	Dry <sup>1</sup>	Dry <sup>1</sup>
OW8B	200.84	74.84 - 84.84	4/13/2021	98.40	102.44
OW9	198.07	108.07 - 128.07	4/12/2021	84.55	113.52
OW10	195.54	106.04 - 126.04	4/12/2021	75.25	120.29
OW12	208.42	108.42 - 128.42	4/12/2021	90.21	118.21

Notes:

Elevation data per California Coordinate System NADV88

btoc = below top of casing

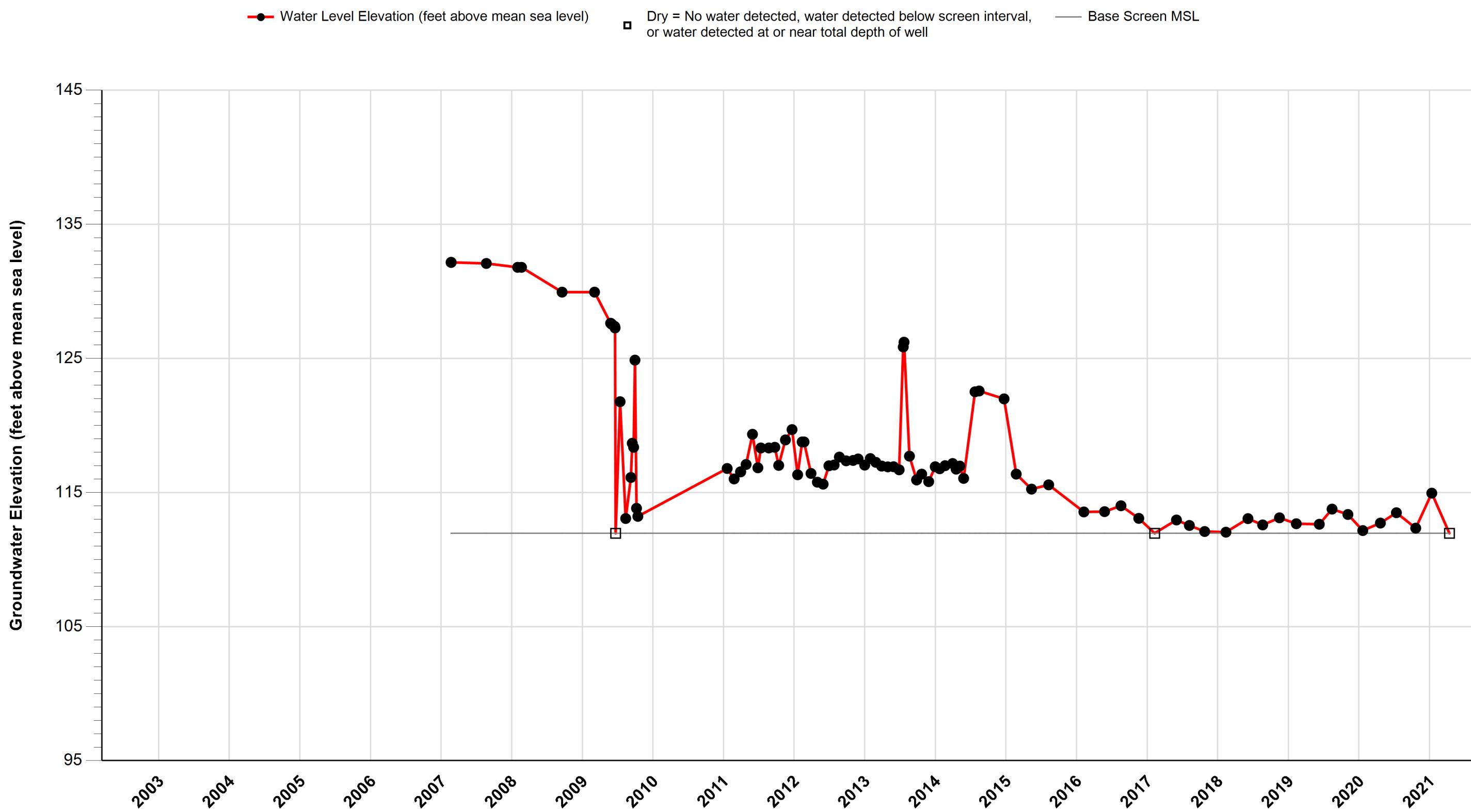
Dry = No water detected, water detected below the screen interval, or water detected at or near total depth of well

MSL = mean sea level

1. OW-8A had a measured water level of 124.01 feet which is inconsistent with measurements at the surrounding wells. This well has been dry since 12/22/2014 and is likely still dry.

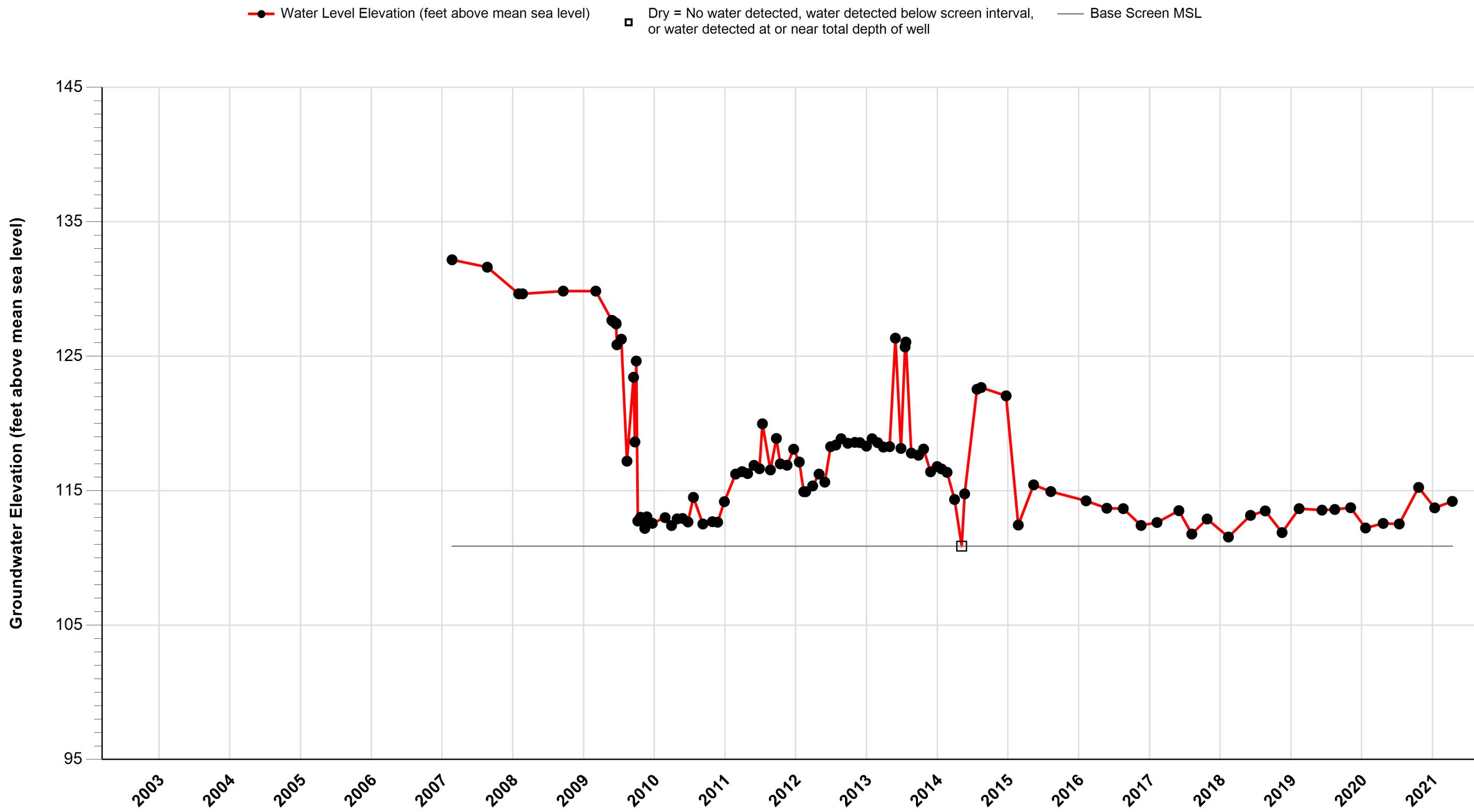
**Attachment E, Figure E-1**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**

**EW-1**

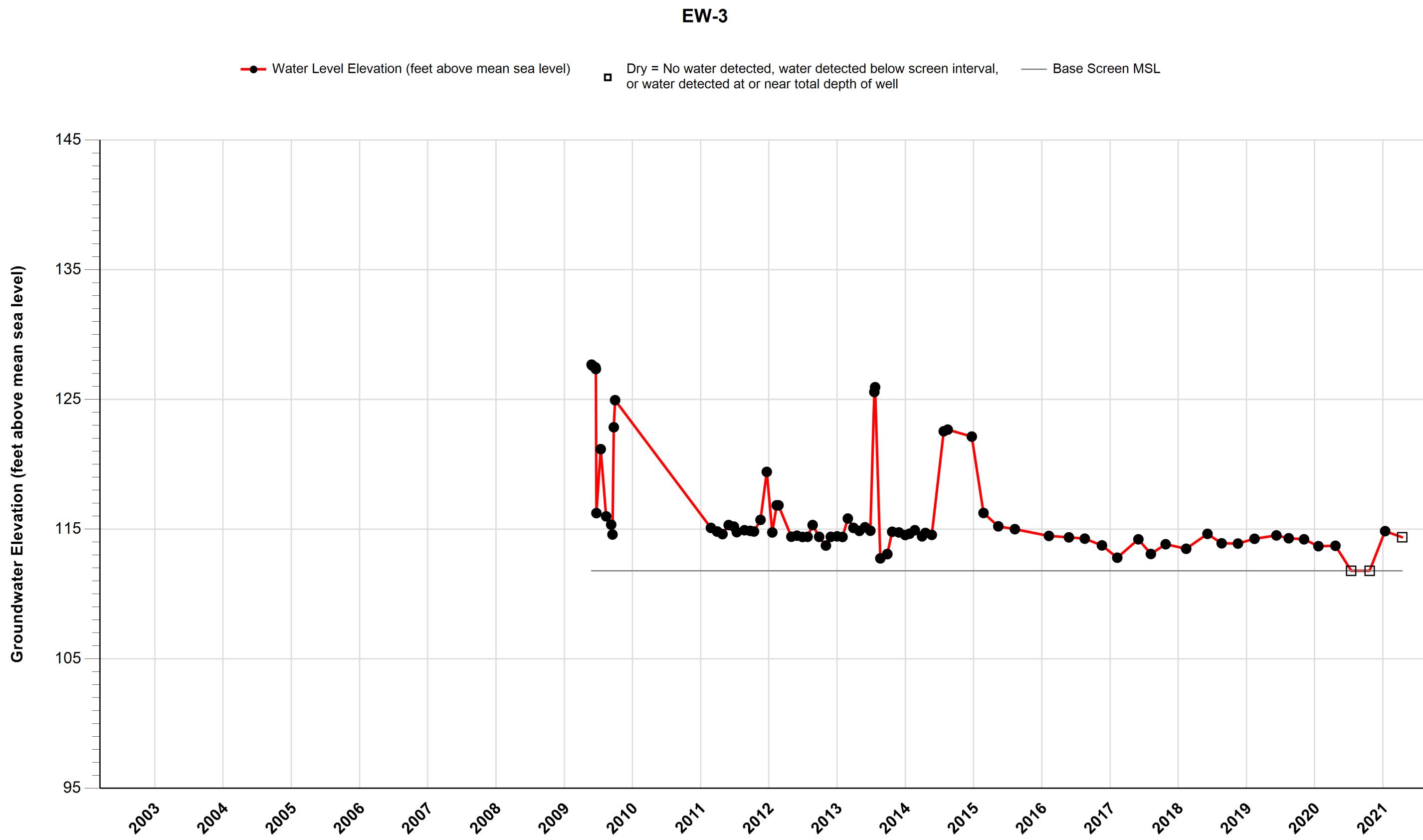


**Attachment E, Figure E-2**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**

**EW-2**

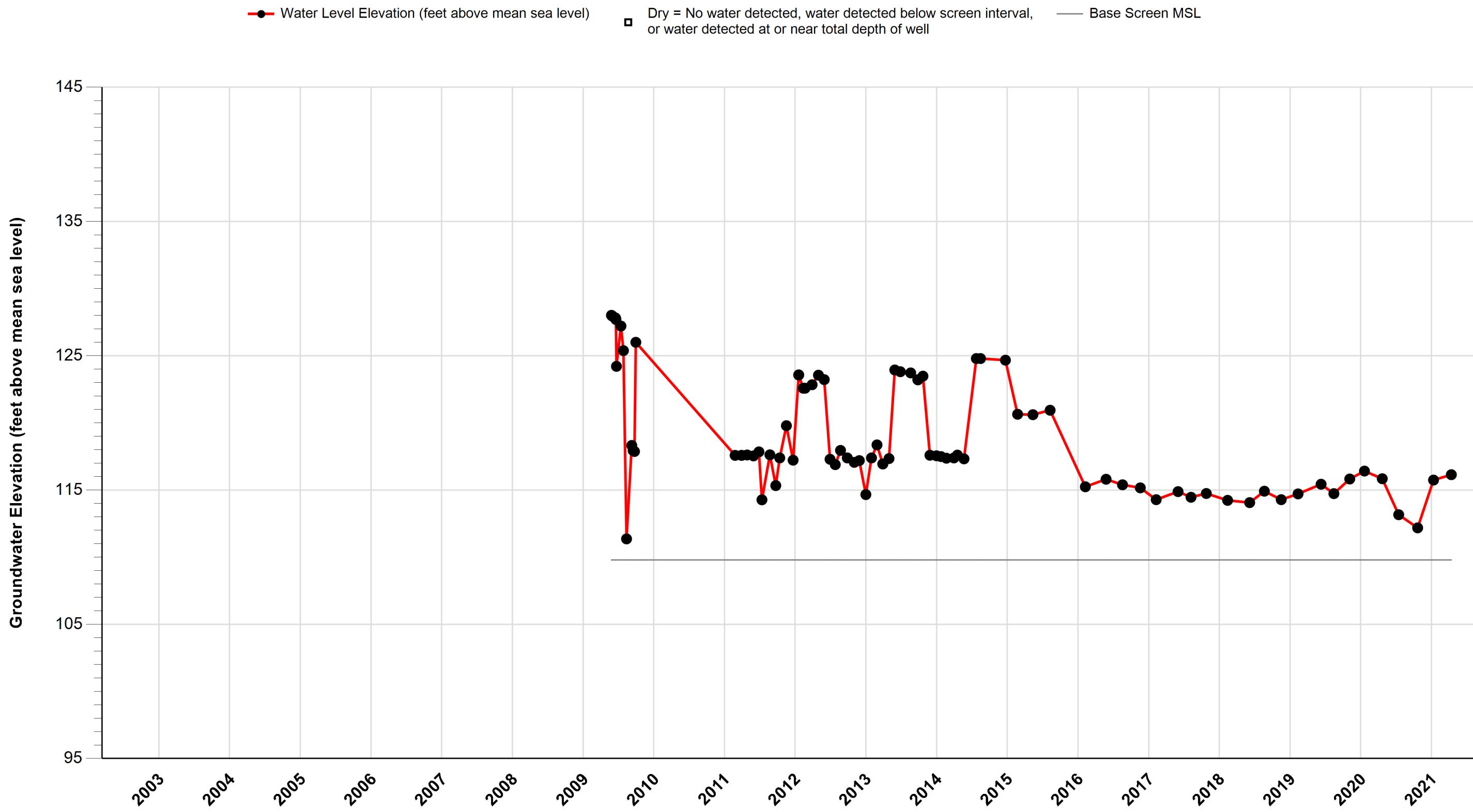


**Attachment E, Figure E-3**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**



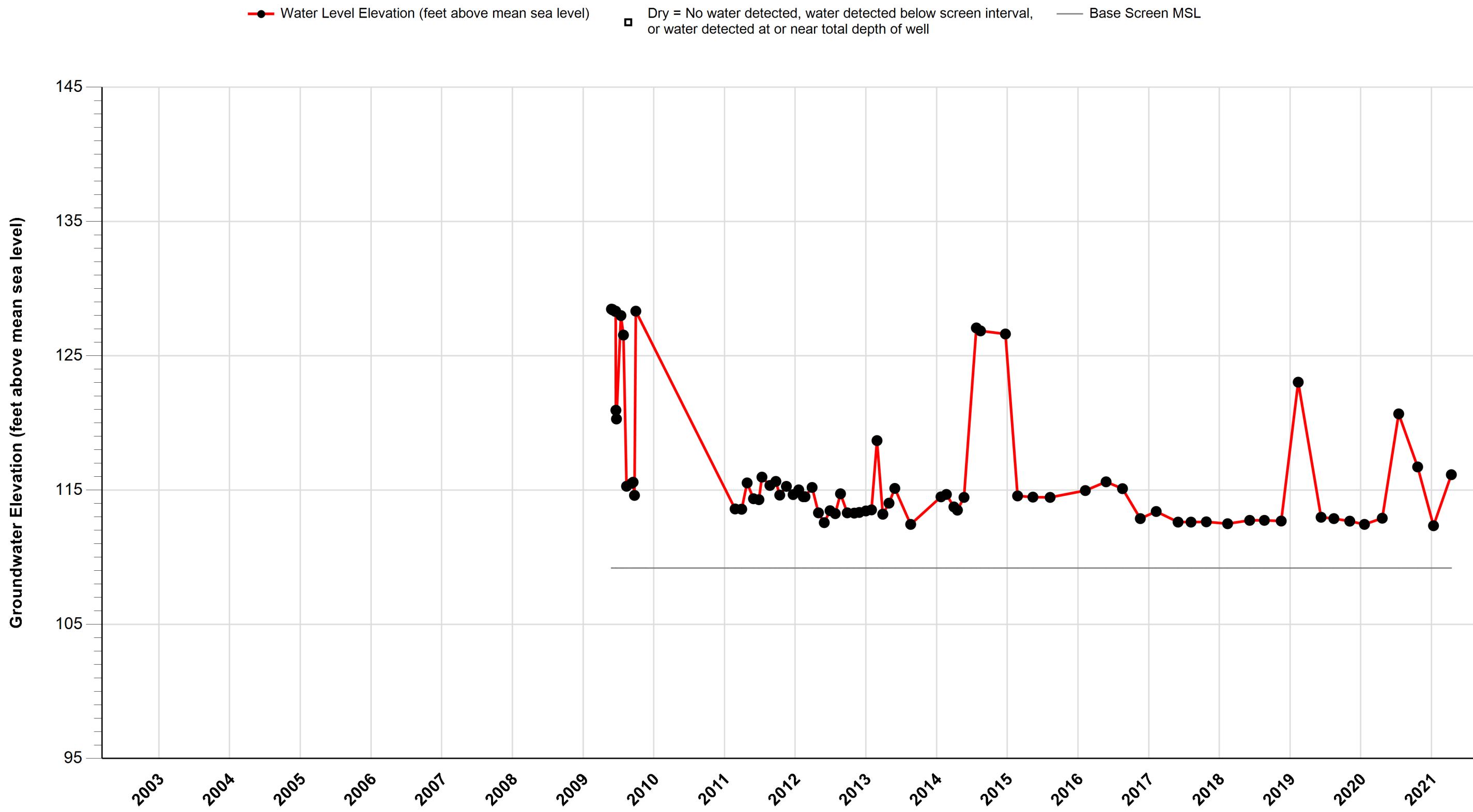
**Attachment E, Figure E-4**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**

**EW-4**



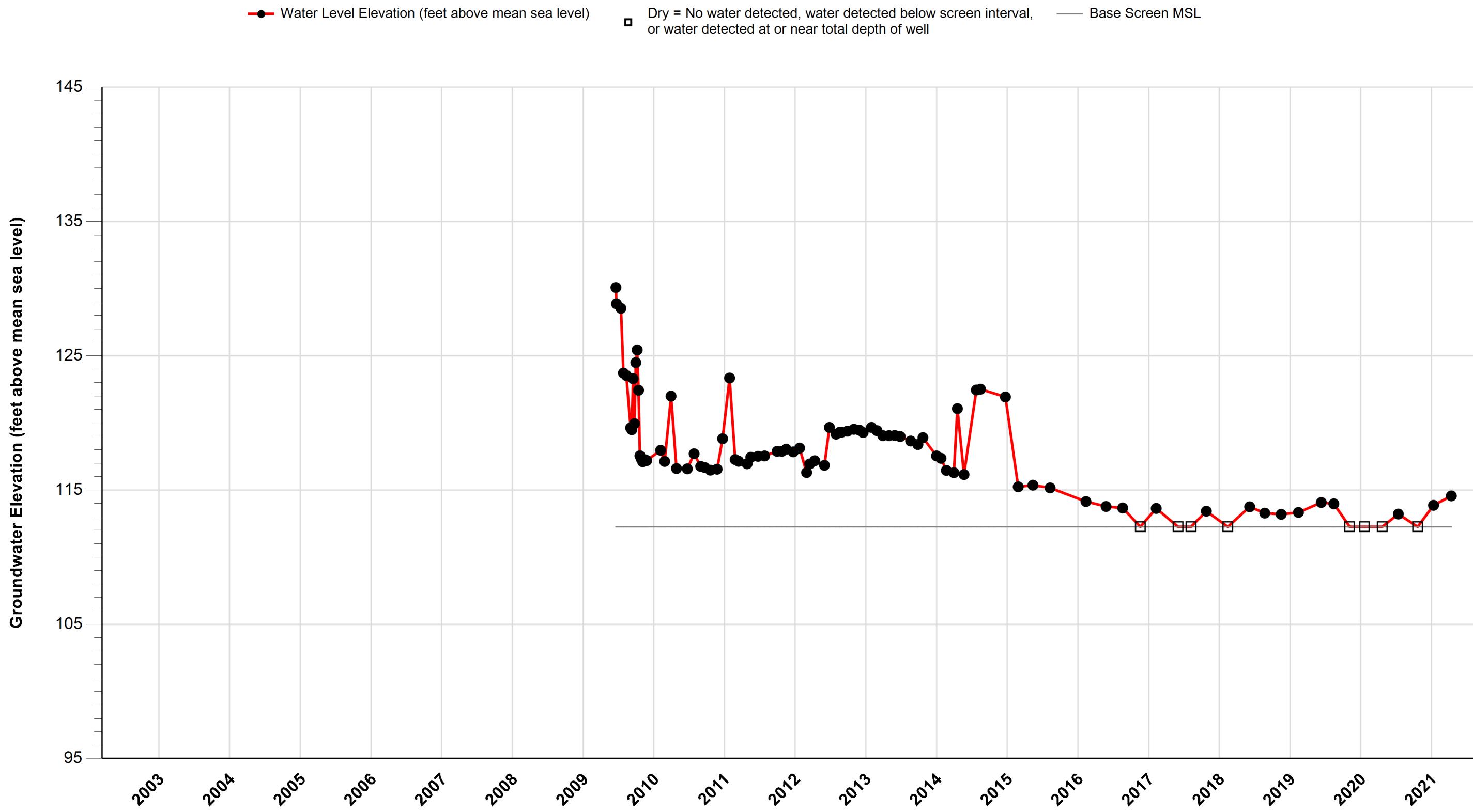
**Attachment E, Figure E-5**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**

**EW-5**



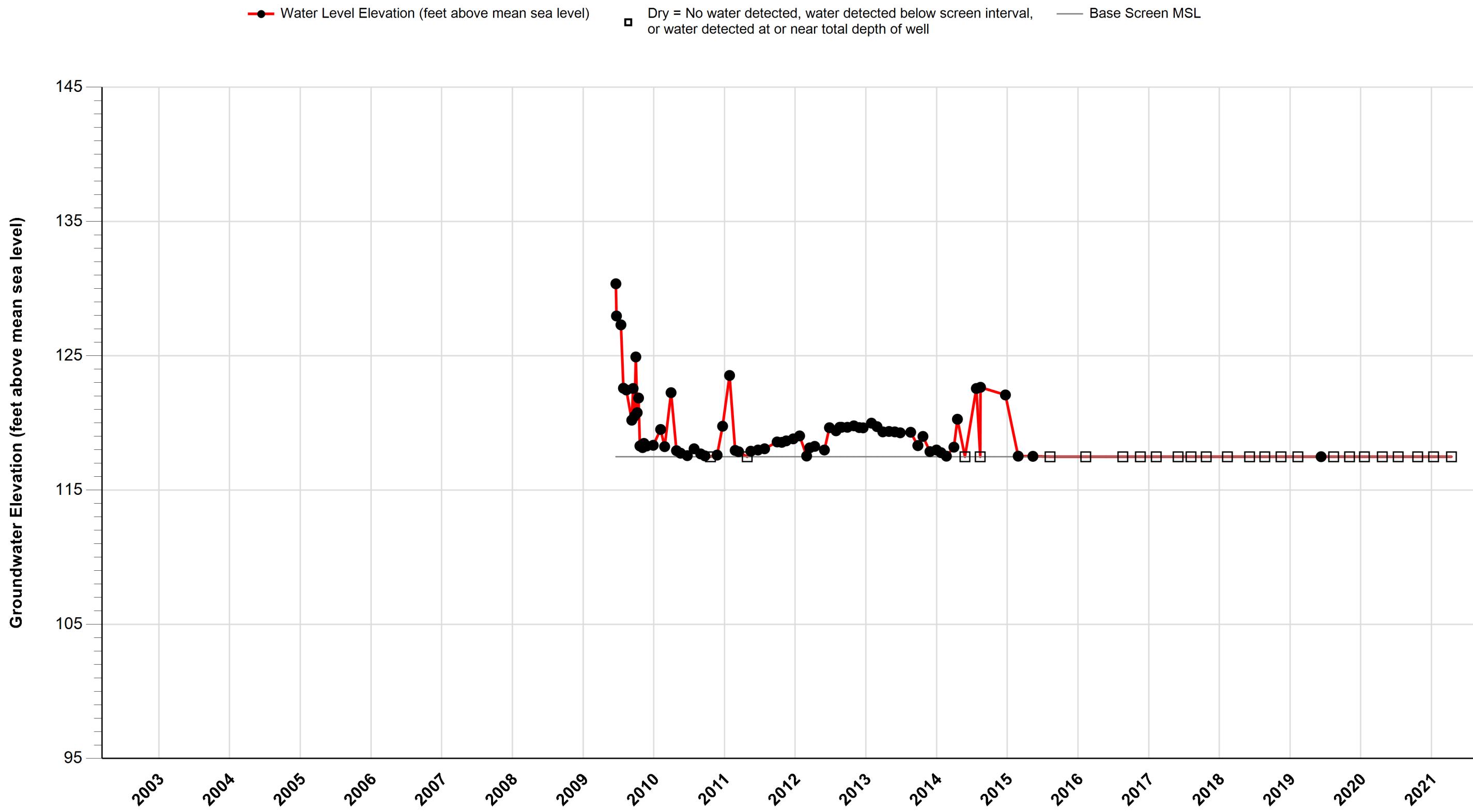
**Attachment E, Figure E-6**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**

**PZ-1**



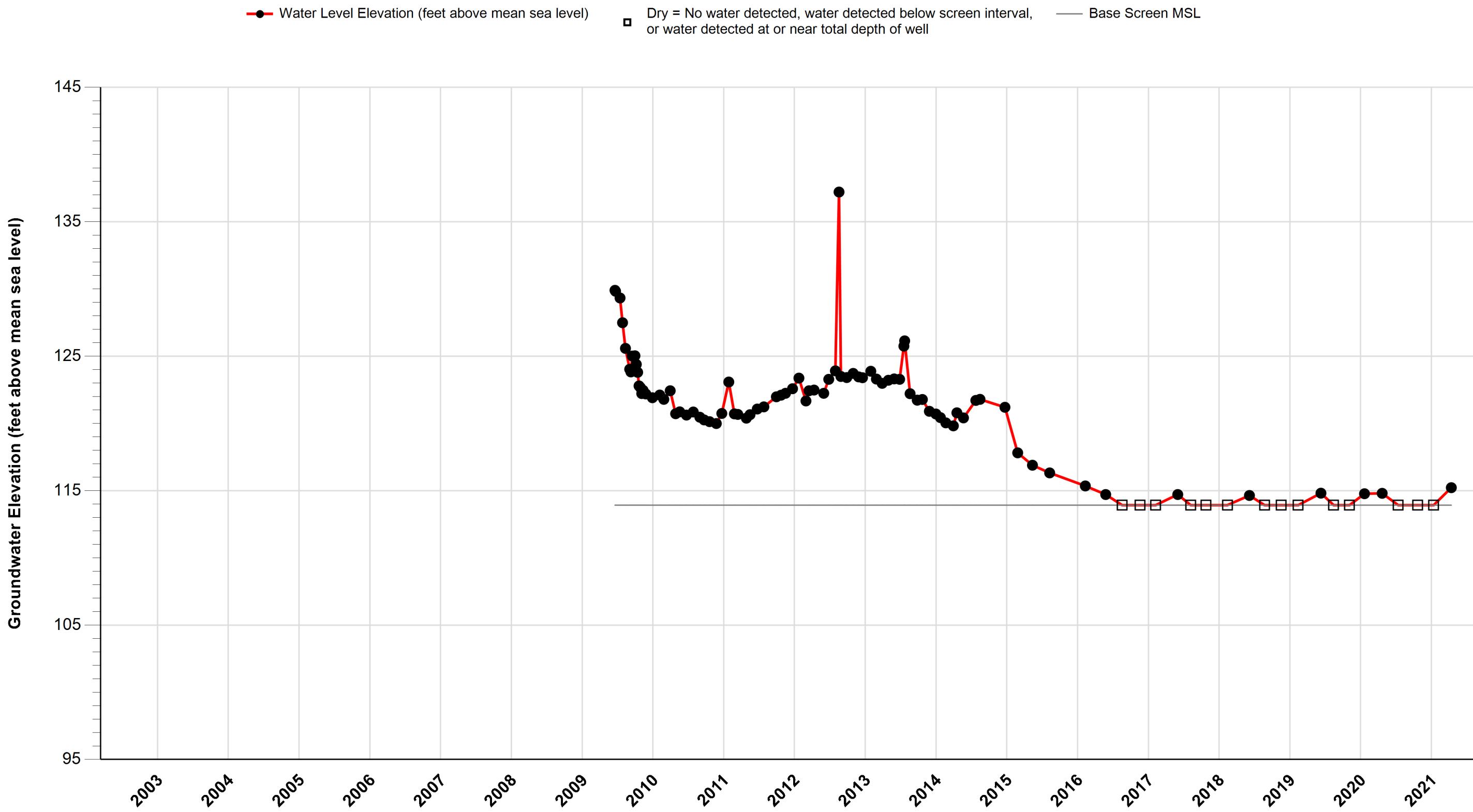
**Attachment E, Figure E-7**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**

**PZ-2**



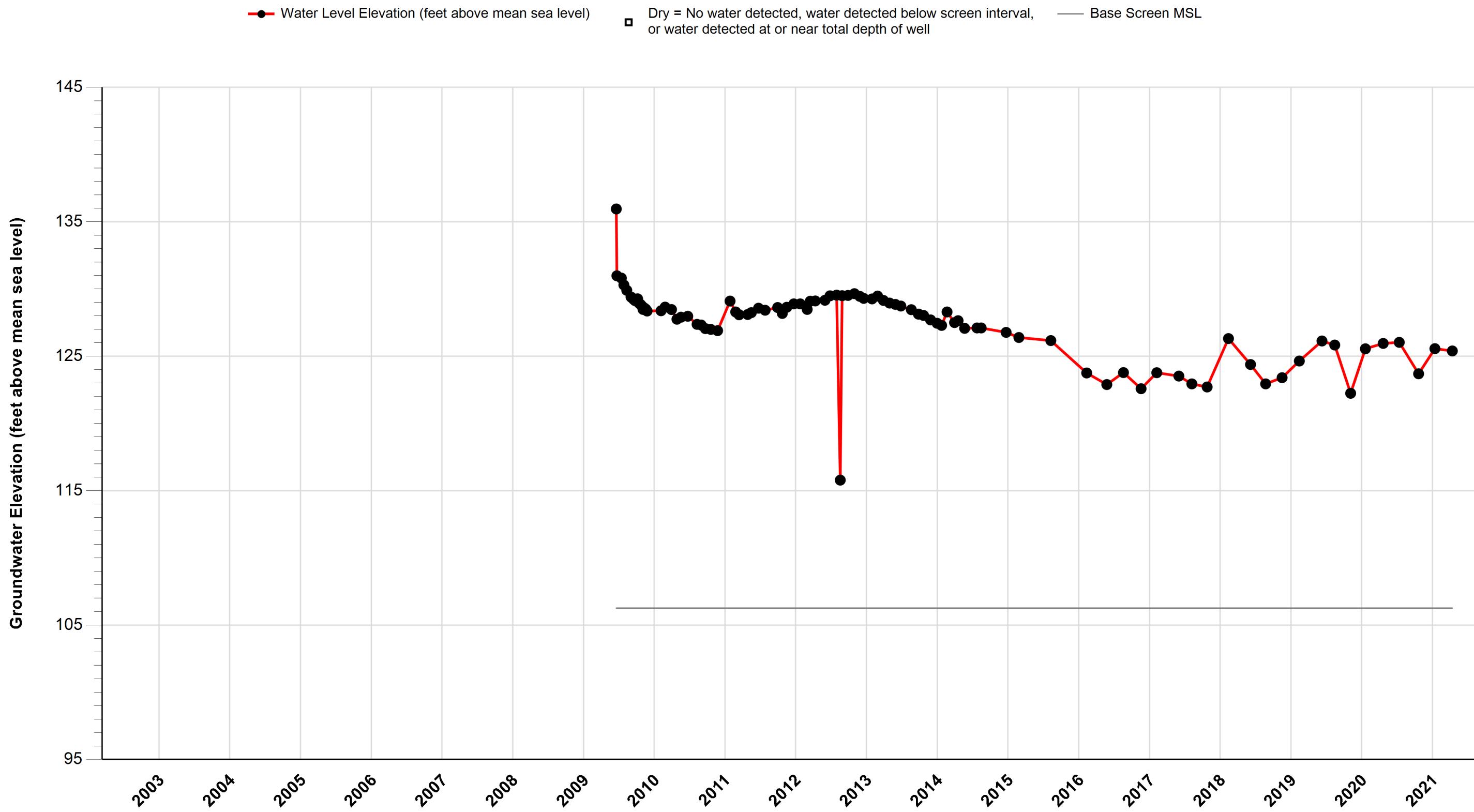
**Attachment E, Figure E-8**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**

**PZ-3**

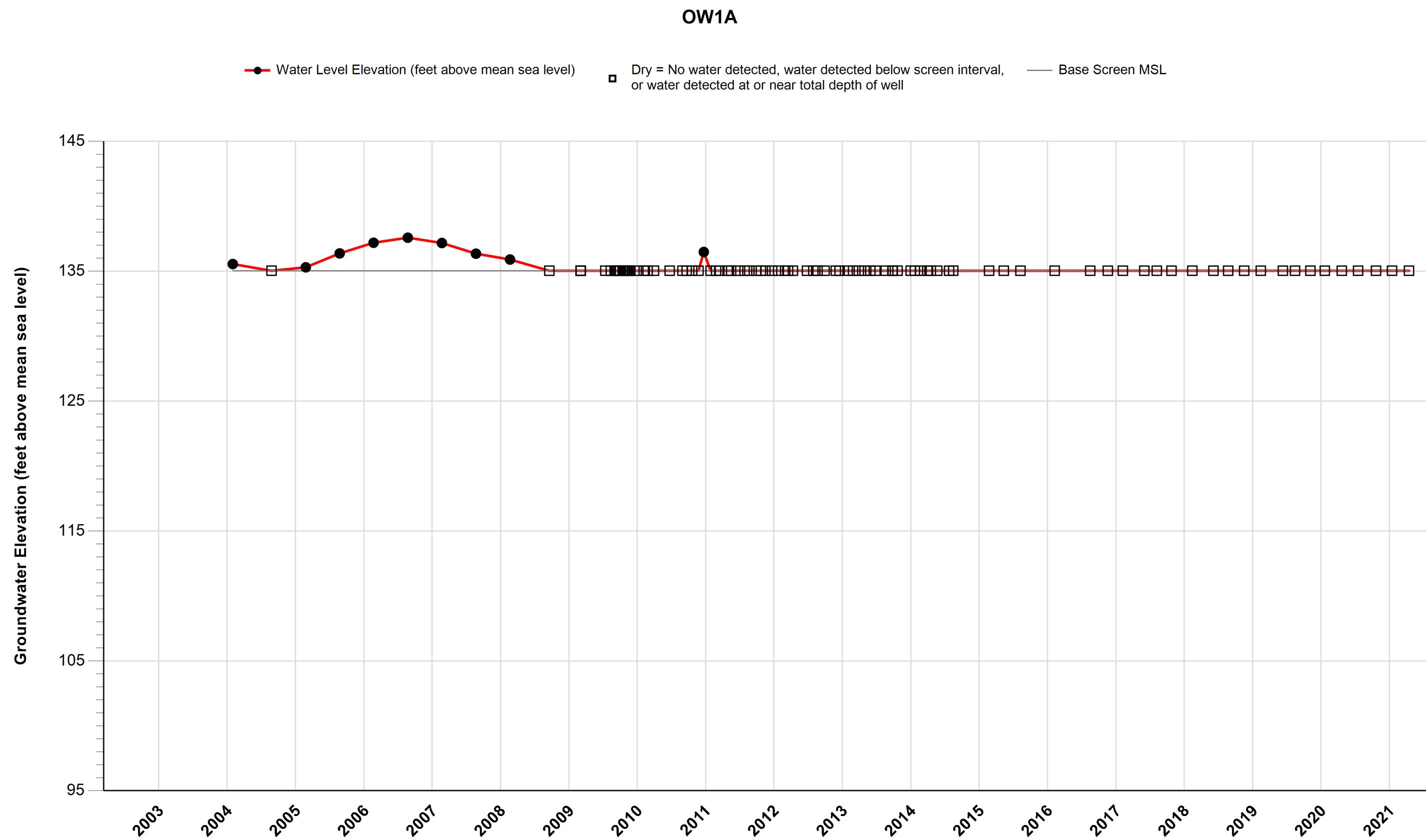


**Attachment E, Figure E-9**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**

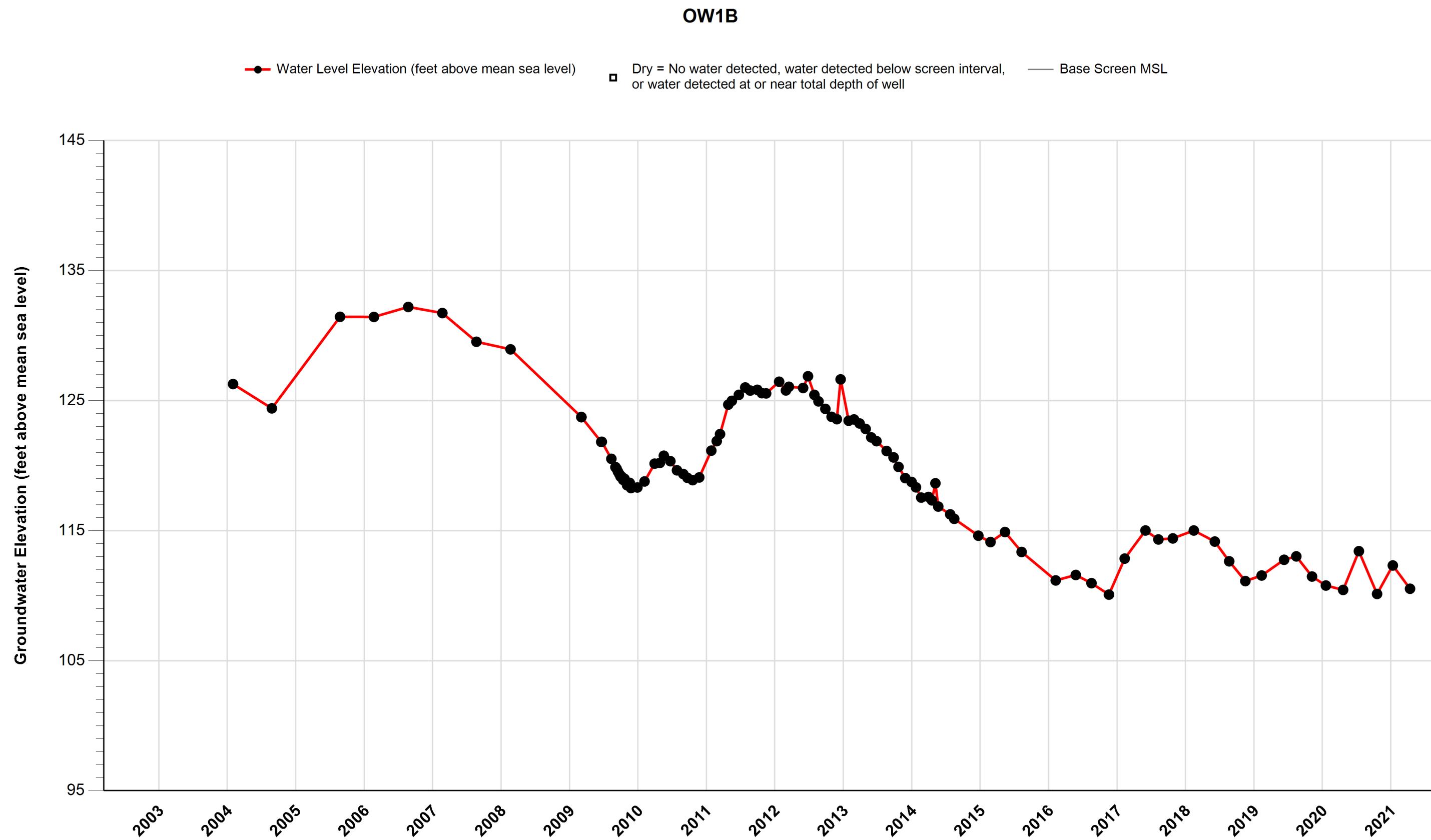
**PZ-4**



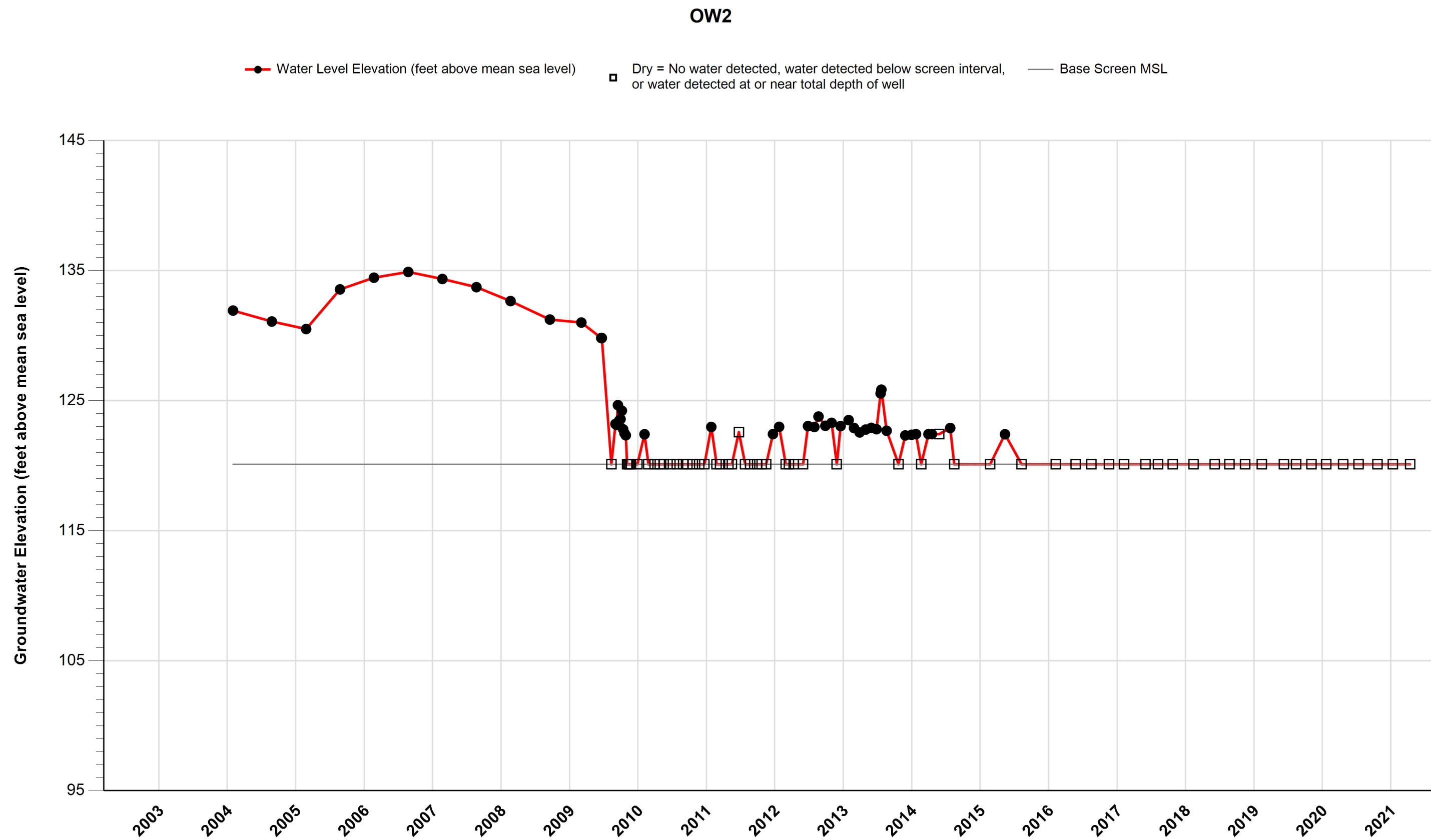
**Attachment E, Figure E-10**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**



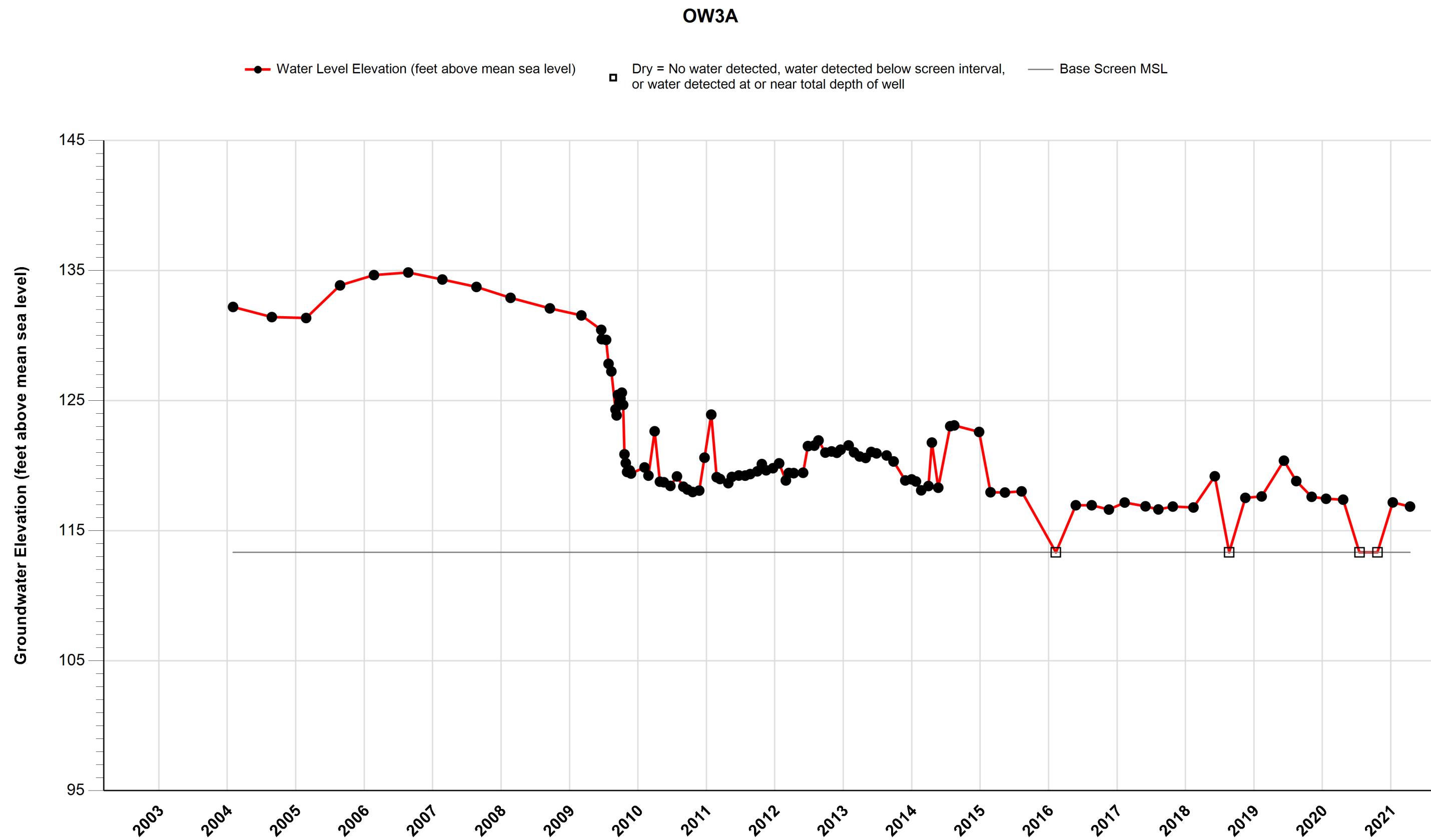
**Attachment E, Figure E-11**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**



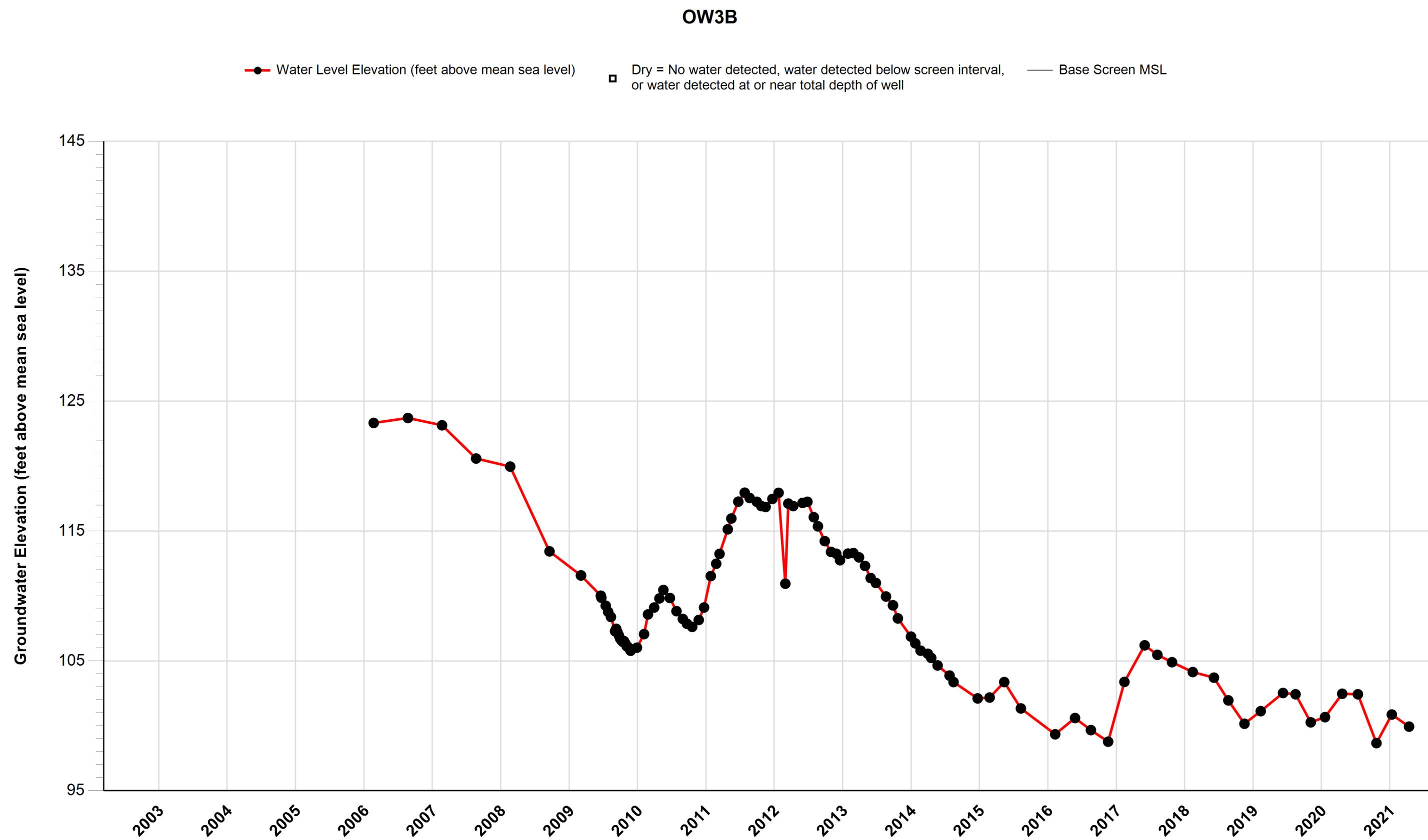
**Attachment E, Figure E-12**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**



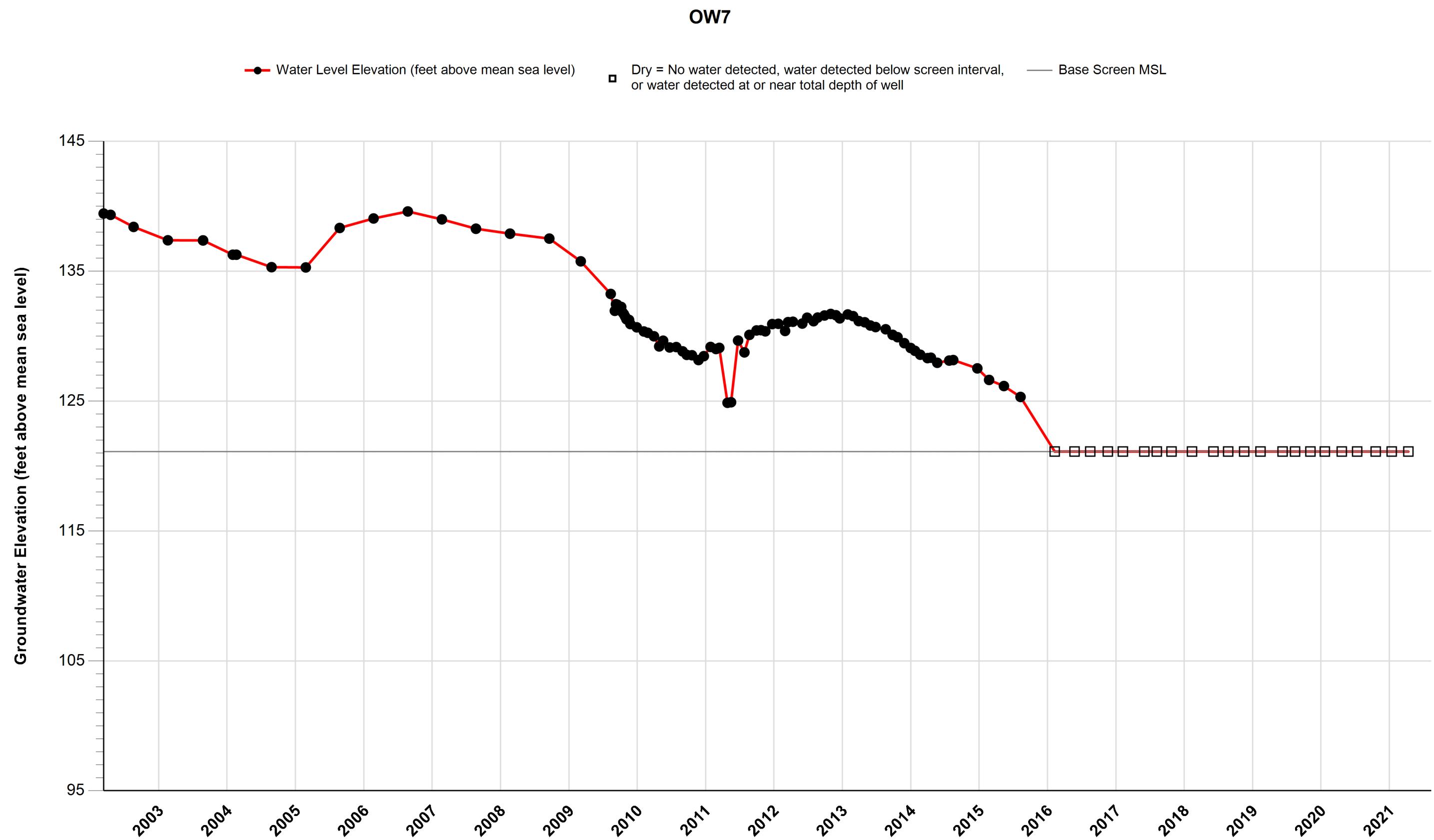
**Attachment E, Figure E-13**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
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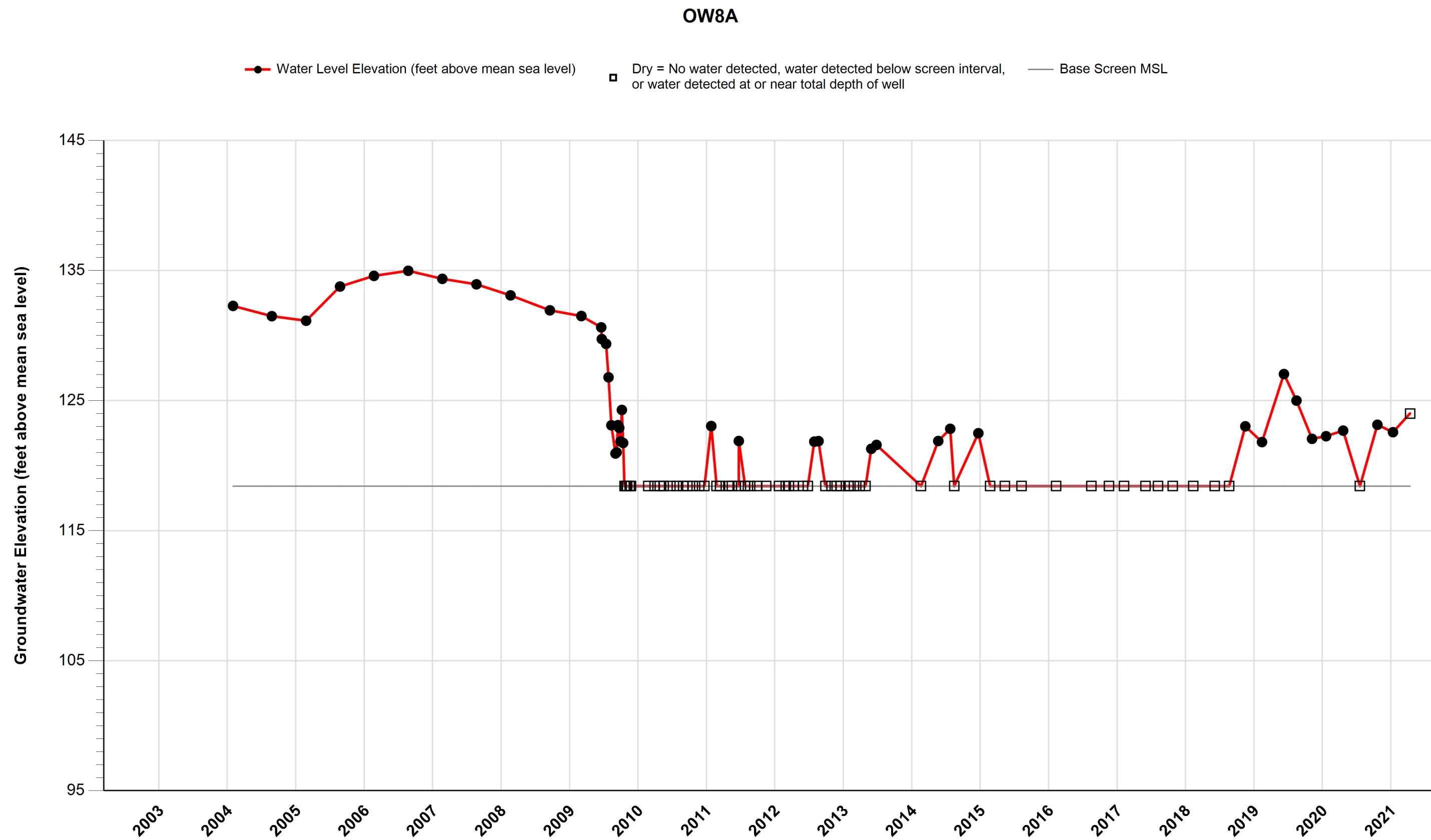
**Attachment E, Figure E-14**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**



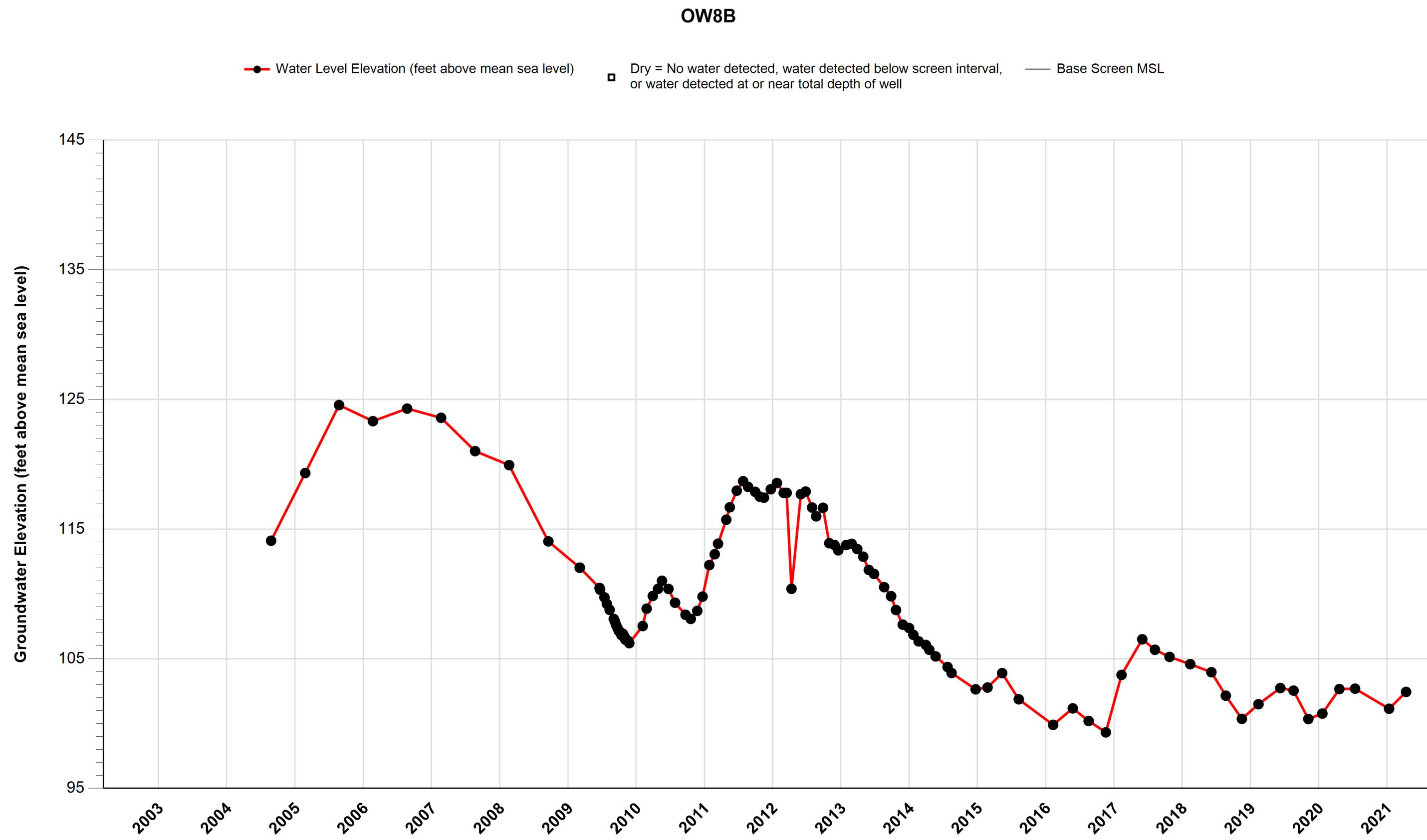
**Attachment E, Figure E-15**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**



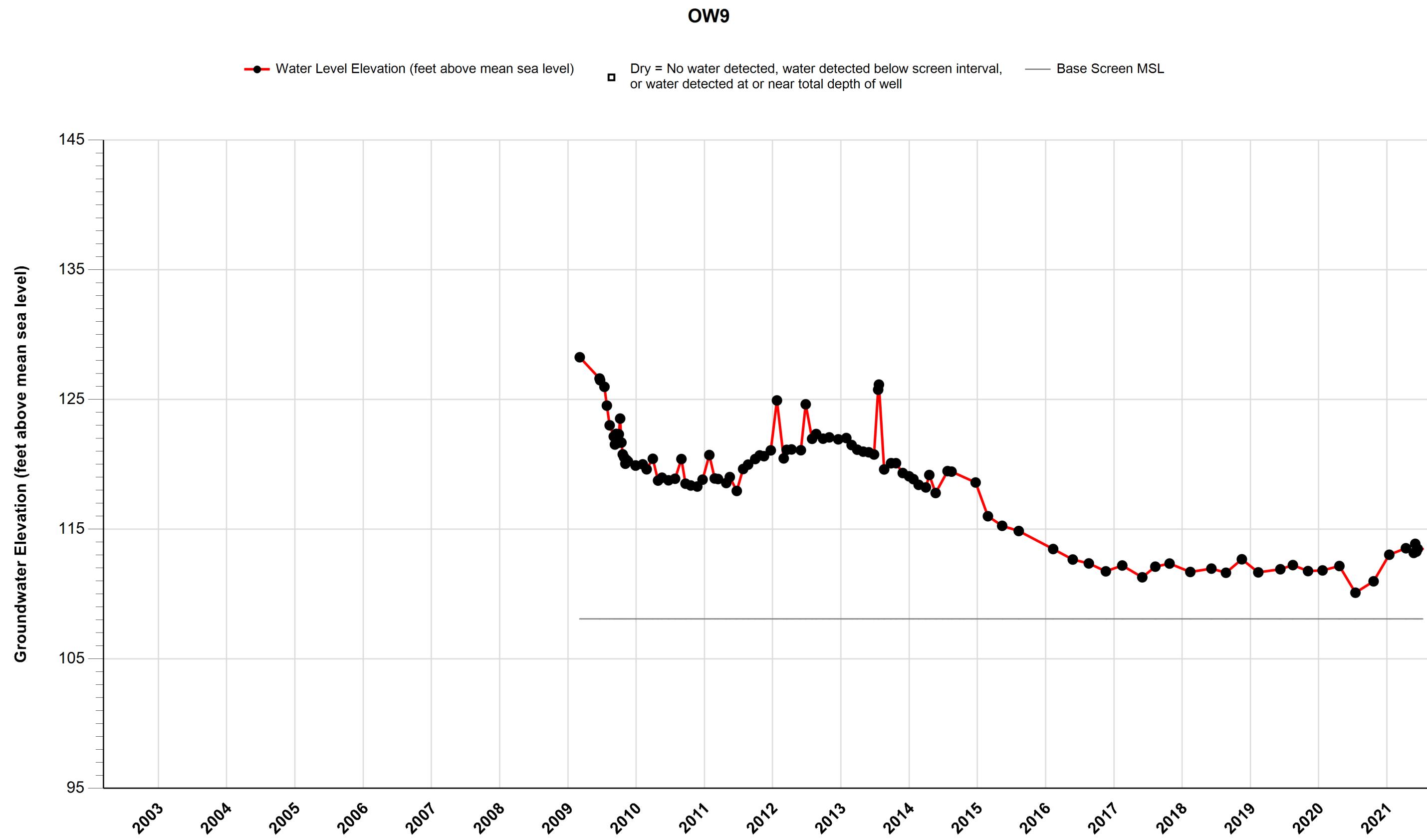
**Attachment E, Figure E-16**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
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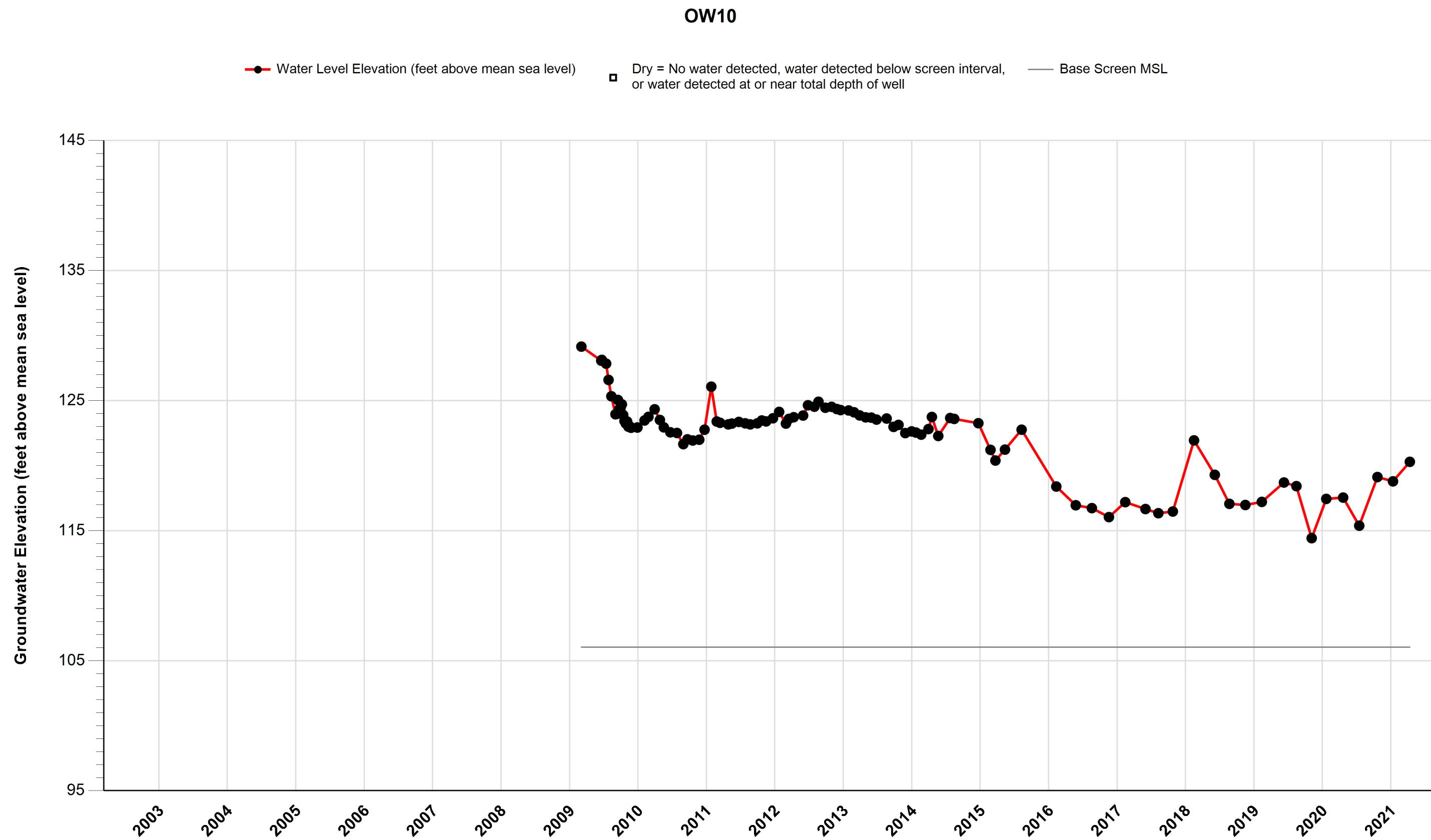
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**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
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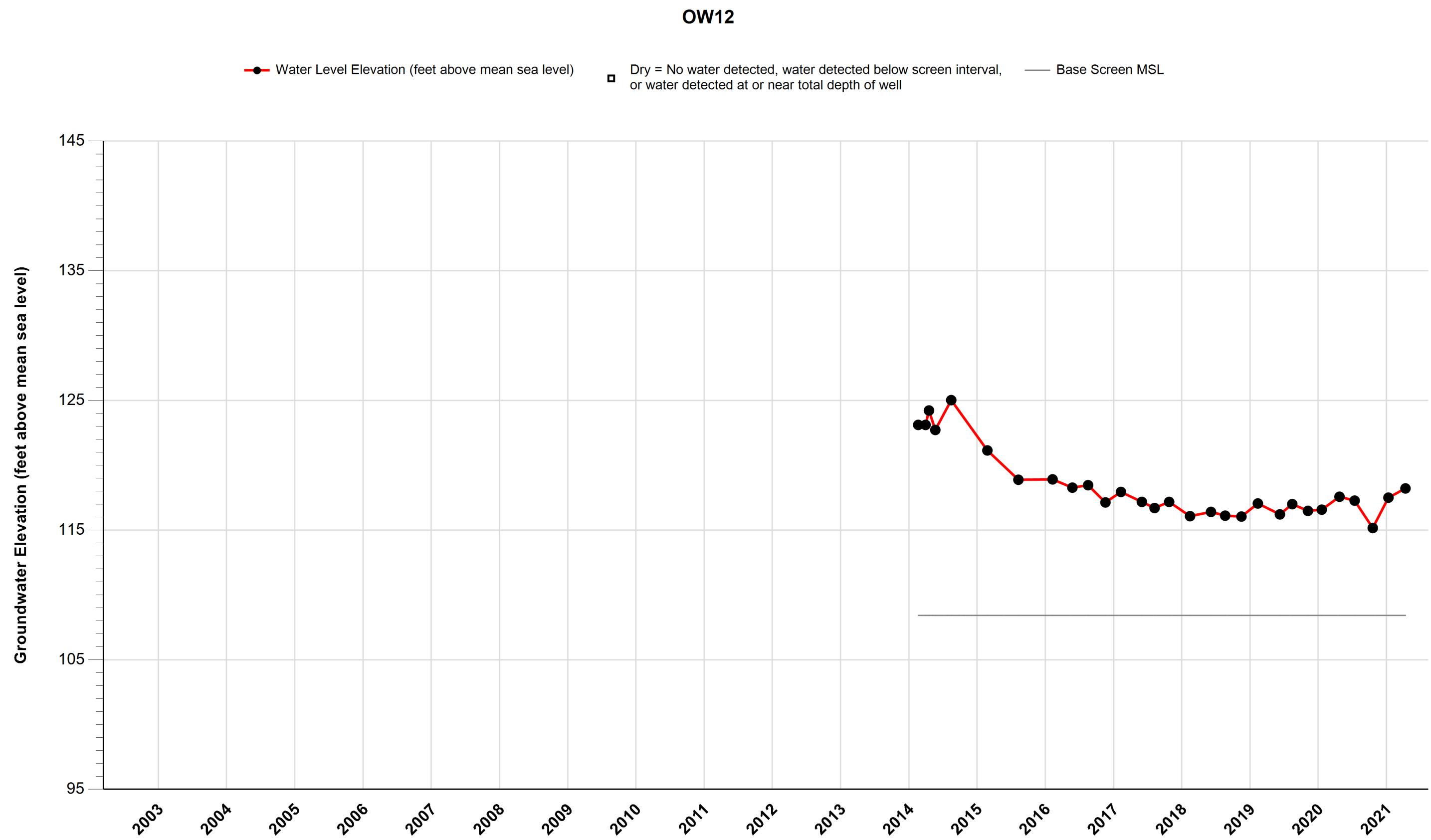
**Attachment E, Figure E-18**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**



**Attachment E, Figure E-19**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**



**Attachment E, Figure E-20**  
**OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site**  
**PSVP Piezometric Data**



## **ATTACHMENT F**

# **Quarterly Groundwater Containment Review**



## Memorandum

*To:* Jaime Dinello, de maximis, inc.

*From:* Matt Gamache, CDM Smith

*Date:* August 5, 2021

*Subject:* Omega Operable Unit 1 EE/CA Remedy

*Quarterly Groundwater Containment Review – April 12-23, 2021*

This memorandum provides and discusses the second quarter 2021 (2Q2021) groundwater elevation contours based on the April 12-23, 2021 groundwater monitoring activities, and the response of the local groundwater table to the Omega Operable Unit (OU)-1 Groundwater Containment Remedy (GCR) operation, which was installed and began operating in 2009. The primary goal of the GCR is to contain the highest levels of contamination dissolved in groundwater within OU-1, so that the contamination does not migrate and contribute to the downgradient regional groundwater plume.

Extraction wells (EWs) located along Putman Street are designed to provide a hydraulic barrier at the down-gradient boundary of OU-1 (Figure F-1). In addition to operation of the GCR hydraulic containment extraction wells, other groundwater extraction is occurring within OU-1. Six dual-phase extraction (DPE) wells are currently operating and extracting groundwater within OU-1. These DPE wells were constructed in June through December 2014 as part of the Full Scale On-Site (OU-1) Soil Remedy under the 2010 Consent Decree between the USEPA and OPOG and are also shown on Figure F-1. Although installed as part of the OU-1 soil remedy to increase subsurface vapor removal, the DPE wells are currently extracting the majority of the water treated by the GCR groundwater treatment plant.

Between April 12-23, 2021, in accordance with the approved Performance Standards Verification Plan (PSVP; CDM, 2007), water level elevations were measured manually for the purposes of demonstrating hydraulic containment of groundwater within OU-1. The majority of the monitoring points used in this evaluation lie within the boundaries of OU-1. However, selected monitoring points immediately adjacent to OU-1 (e.g. PZ-3, OW-9, and OW-11) are also used to assess the performance of the OU-1 groundwater remedy. All PSVP-required locations were measured manually during 2Q2021. These data are plotted along with interpreted water level elevation contours (1-foot interval) on Figure F-1 and demonstrate that OU-1 groundwater is contained.

The water-level contour map (Figure F-1) for the measurement dates (April 12-23, 2021) demonstrates that flow from the former Omega Chemical property located at 12504 and 12515 Whittier Blvd. Whittier, California (property) is primarily converging along Putnam Street, around the OU-1 Soil Remedy well DPE-9 and west of Putnam Street around the OU-1 Soil Remedy well VE-10D. The total average extraction rate pumped in 2Q2021 was 3.1 gpm. Containment is similar between 1Q2021 and 2Q2021.

Horizontal gradients within OU-1 are variable, at approximately 0.05 ft/ft from the property toward Putnam Street. The horizontal gradients between OW-3A and DPE-9 and between OW-9 and VE-10D (along and to the west of Putnam Street) were 0.04 ft/ft and 0.17 ft/ft, respectively.

Vertical gradients are examined at one well triplet and two well pairs: OW-1A/OW-12/OW-1B, OW-3A/OW-3B, and OW-8A/OW-8B, the locations of which are shown on Figure F-2. For each set of wells, the 'A' well is screened in the A-zone and the 'B' well is screened in the B-zone. OW-12 is also screened in the A-zone in-between OW-1A and OW-1B. The A-zone, essentially the water table aquifer, is currently being pumped by the GCR EWs and the OU-1 Soil Remedy DPE wells. The A-zone is the principal zone impacted by VOCs at the site.

The A and B-zones show minimal hydraulic connection as evidenced by the significant difference in head between them. The lithologic data demonstrate the presence of a 30-foot thick layer of clayey silt or silty clay that underlies the A-zone and acts as a confining unit between these zones, as shown on cross sections A-A' and B-B', further illustrating this hydraulic and physical vertical separation. The locations of both sections are shown in Figure F-3 and the cross sections themselves are shown in Figures F-4 (A-A') and F-5 (B-B'). In Figure F-4, the well screens of OW-3B and OW-8B are shown to be below the confining unit that underlies the A-zone. In Figure F-5, the lithology around OW-1A, OW-12, and OW-1B varies from what is observed at the other well pairs. In this instance, OW-1A is partially screened within a sand layer, but the area around the OW-12 and OW-1B well screens has been classified as clayey silt or silty clay. Since there are no lithological markers differentiating the two lower-screened wells (OW-12 and OW-1B), the groundwater elevations must be used to infer the degree of hydraulic connection/separation. Hydrographs of the water levels over time at these three wells are shown in Figure F-6. Although OW-1A has been dry for most of the OW-12 data collection period, vertical (downward) gradients can be seen between these two wells in the few instances where water was found at OW-1A since 2013. Vertical (downward) gradients between OW-12 and OW-1B are also present for all synoptic rounds of data except for August 2017, when groundwater elevations are approximately 117 feet above mean sea level (AMSL) at both wells. Despite these similar elevations in August 2017 and again on February 2018, the units screened by these two wells are still considered to be hydraulically separated. This is similar to what has been observed at OW-3A/OW-3B (Figure F-7) and OW-8A/OW-8B (Figure F-8).

The area covered by the cone of depression in 2Q2021 is similar to what was observed and documented in 1Q2021 (CDM Smith, 2021). The combination of GCR extraction, OU-1 Soil Remedy

August 5, 2021

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extraction, and the regional drought conditions has essentially dewatered the A-Zone aquifer. As demonstrated on Figure F-1, containment of the OU-1 groundwater is attained.

Discussions with USEPA have been on-going regarding the potentially inconsistent flow and water level data observed at a subset of groundwater extraction wells. The following summary aims to address questions broached by APTIM/EPA in past report reviews.

OPOG has made significant efforts to determine the source of those data inconsistencies identified in the 2020 annual groundwater monitoring report. For select wells that were identified as providing potentially inconsistent flow and water level data, the frequency of manual water level measurement collection was increased, and special attention paid to the flow meters and pressure transducers associated with each well. Monitoring at well DPE-5 determined the need for replacement of the existing water level transducer which is scheduled to be completed in August or September of 2021.

In response to the declining pumping rates observed at VE-10D, piezometric heads at OW-9, which is adjacent and to the west of VE-10D, were examined. Measured OW-9 groundwater elevations in 1Q2021 and 2Q2021 synoptic rounds were 113.0- and 113.5-feet AMSL, respectively, which are higher than what was observed over the previous quarters when VE-10D was extracting more water. Average OW-9 heads between 1Q2018 and 4Q2020, in comparison, were 111.7 feet AMSL, or approximately 1.6 feet lower. To examine this further, weekly water level measurements were taken at OW-9 and VE-10D between May 17 and June 22, 2021. These data indicated that water levels at OW-9 were responding to pumping at VE-10D, but that the overall magnitude of OW-9 water levels remained between 113.1 and 113.9 feet AMSL. The relative water levels at these wells and the declining flows from VE-10D likely indicate a decrease in well efficiency resulting from the accumulation of fines in the well screen. In the interest of improving well efficiency and avoiding future capture impacts, it is recommended that VE-10D be redeveloped.

Additionally, evaluation of transducers and related instruments and programming associated with DPE-3, and DPE-8, which were identified in December 2020 as producing possibly inconsistent flow and/or water level data, will continue in 3Q2021. Redevelopment of DPE-3, DPE-5, and DPE-8 will be considered at that time.

## **References**

CDM, 2007. *Performance Standards Verification Plan for Phase 1a Area Groundwater Treatment System*. April 19, 2007.

CDM Smith, 2021. *Omega Operable Unit 1 EE/CA Remedy Quarterly Groundwater Containment Review – January 11-13, 2021*. April 1, 2021.

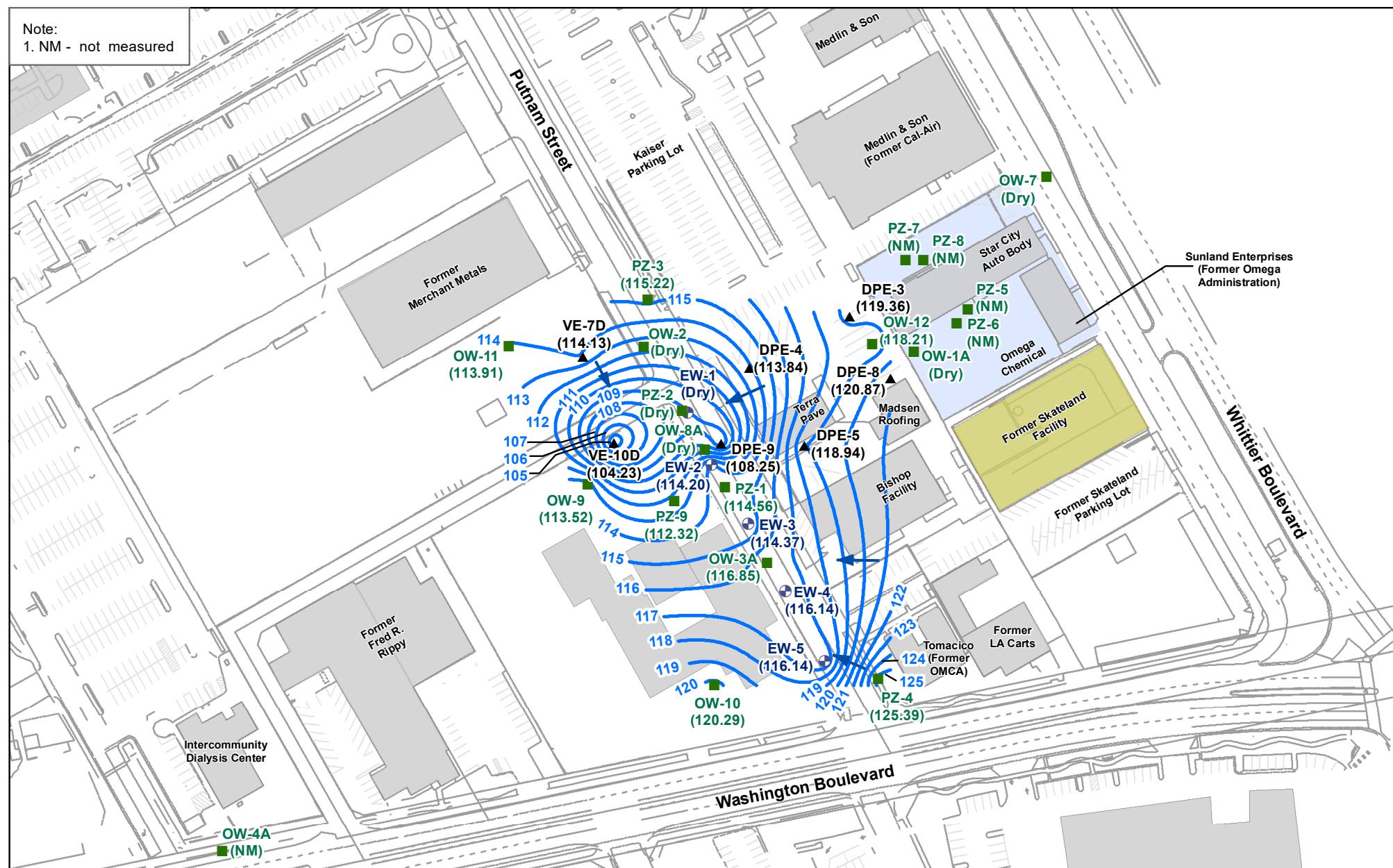
cc: Ed Modiano, de maximis, inc.

August 5, 2021

Page 4

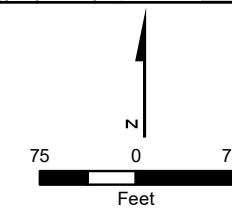
David Chamberlin, CDM Smith

Note:  
1. NM - not measured



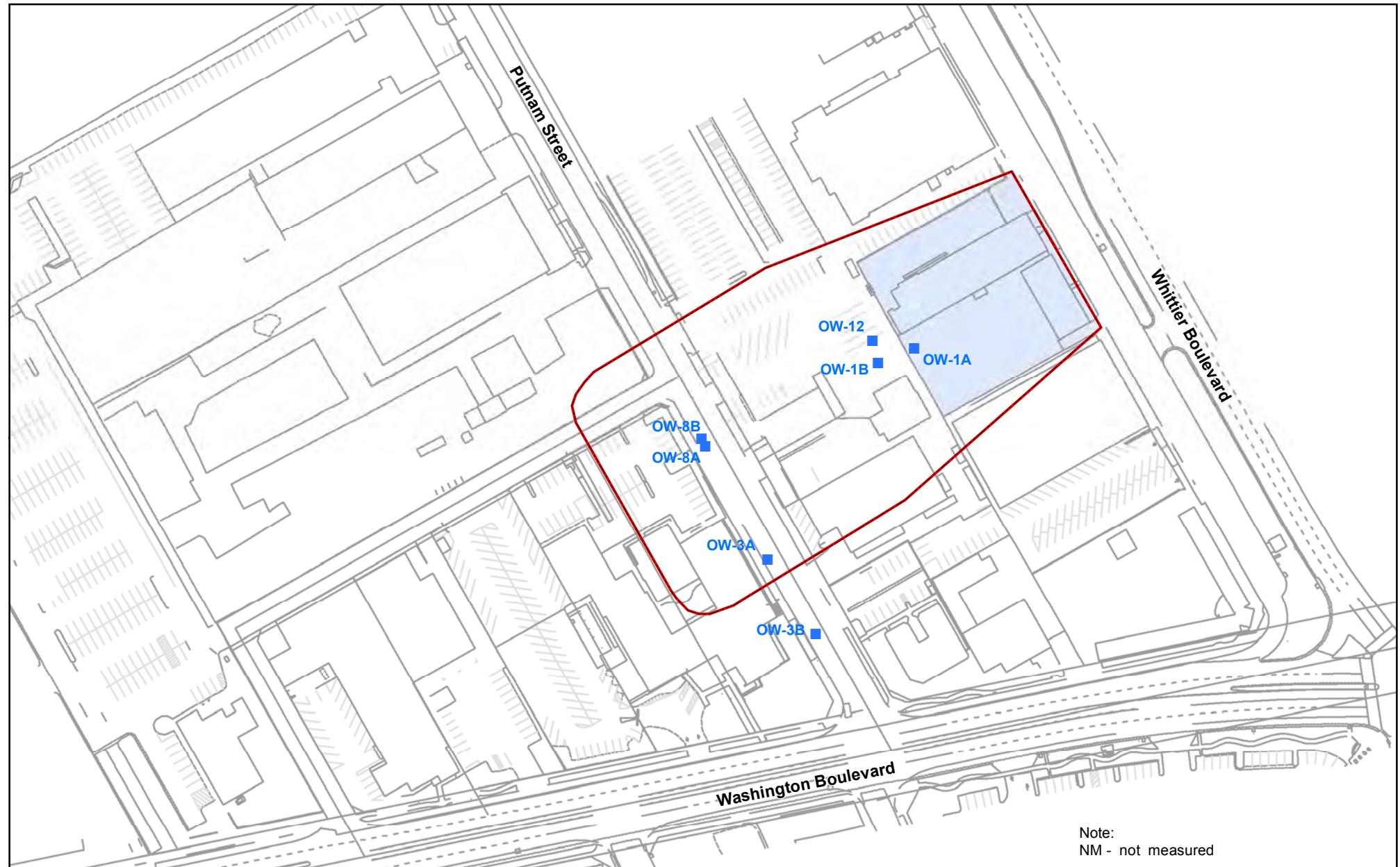
### Legend

- Phase Ia Area
- Former Omega Chemical Property
- Existing Building
- Former Building
- Groundwater Elevation Contour - Dashed where Inferred (Feet above mean sea level)
- Groundwater Flow Direction
- Extraction Well
- Shallow Observation Well / Piezometer
- Dual Phase Extraction Well Location



**Omega Chemical**  
**Shallow Zone**  
**Groundwater Contour Map**  
April 12 - 23, 2021

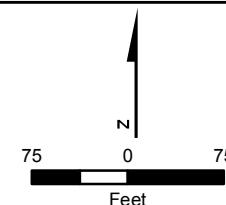
Figure F-1

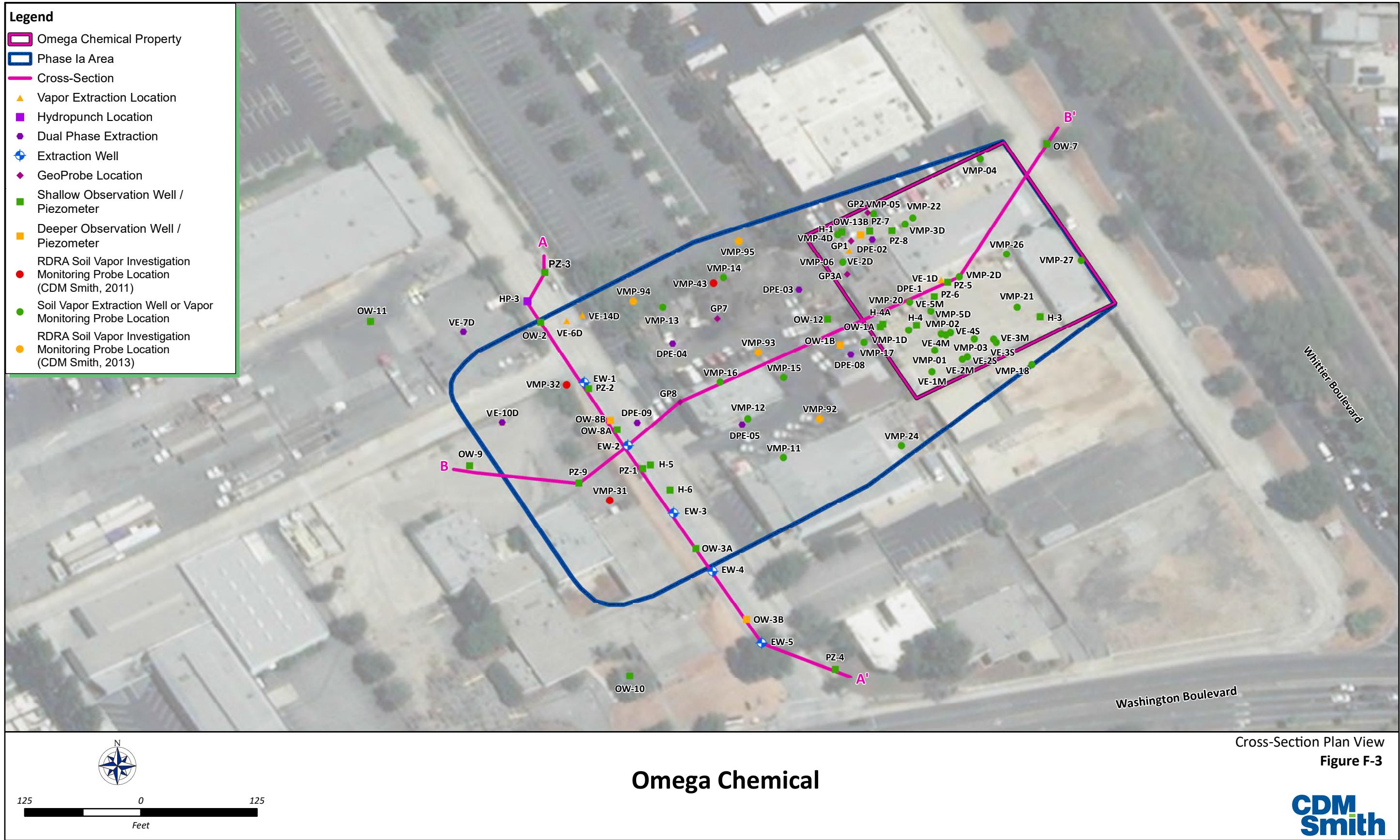


#### Legend

- Phase Ia Area
- Former Omega Chemical Property
- Observation Well Pair (A-zone/B-zone)

**Omega Chemical**  
A-zone/B-zone Well Pairs



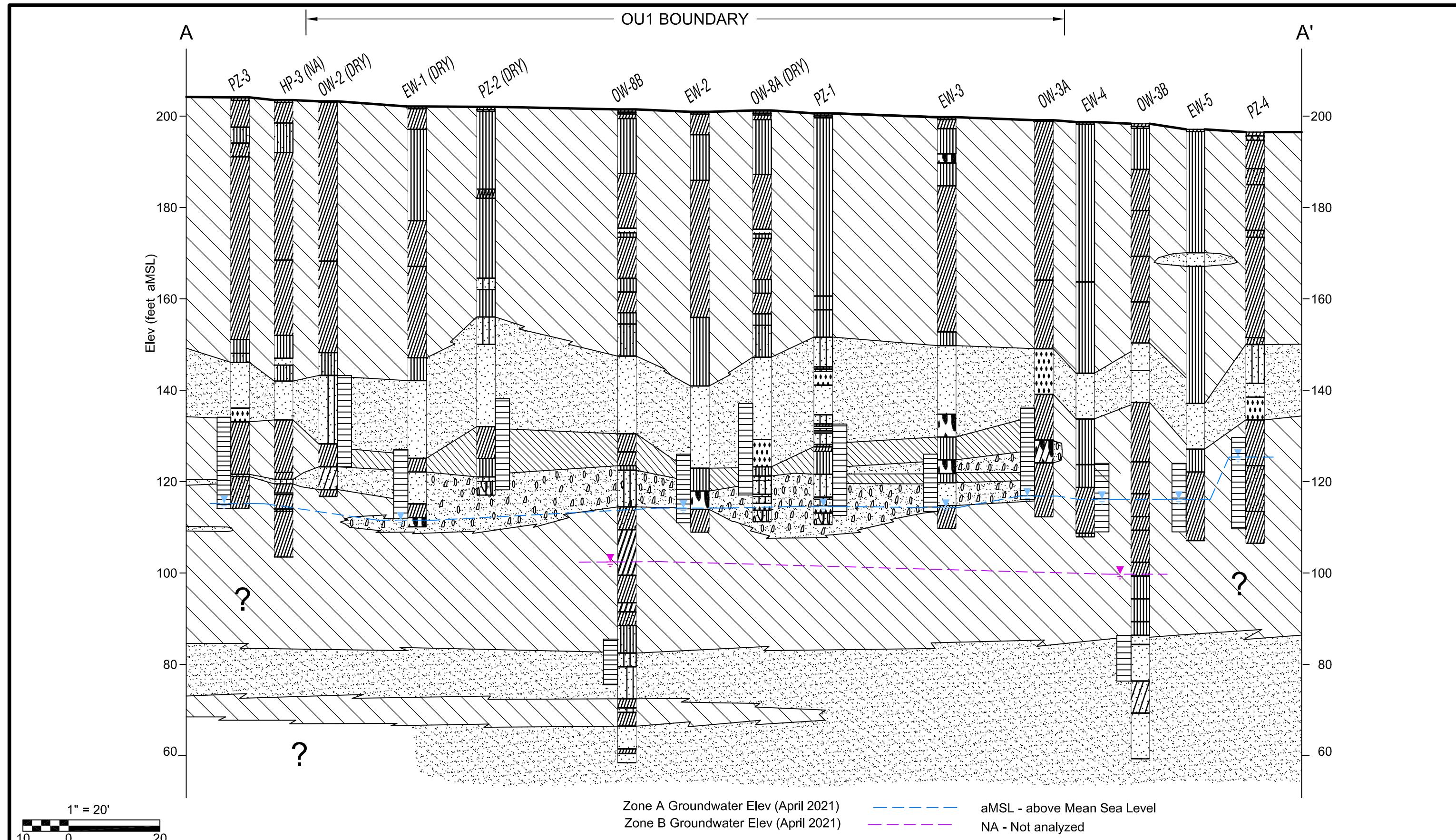


Omega Chemical

## Cross-Section Plan View

### Figure F-3

**CDM  
Smith**



**CDM  
Smith**

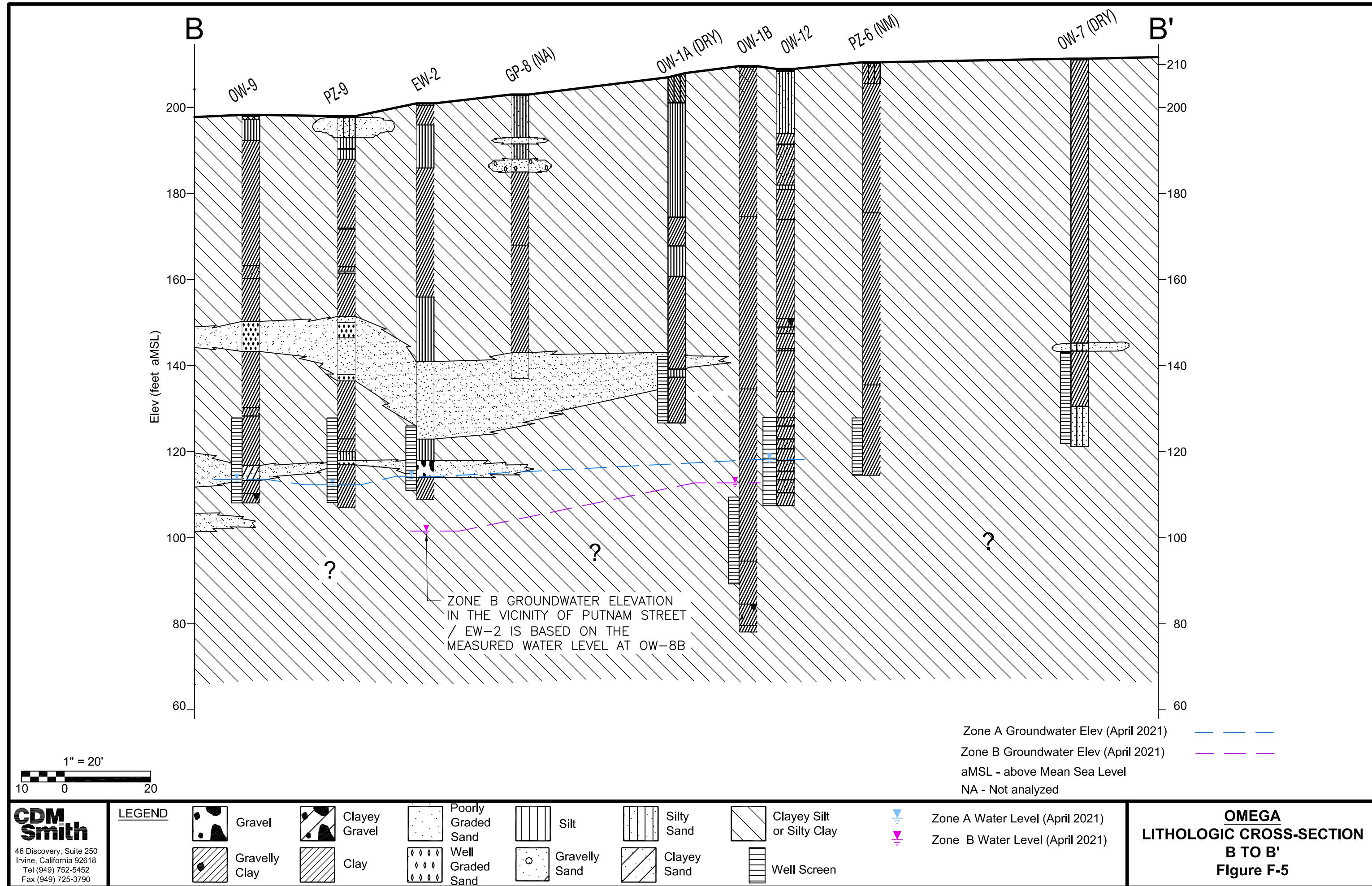
46 Discovery, Suite 250  
Irvine, California 92618  
Tel (949) 752-5452  
Fax (949) 725-3790

## LEGEND

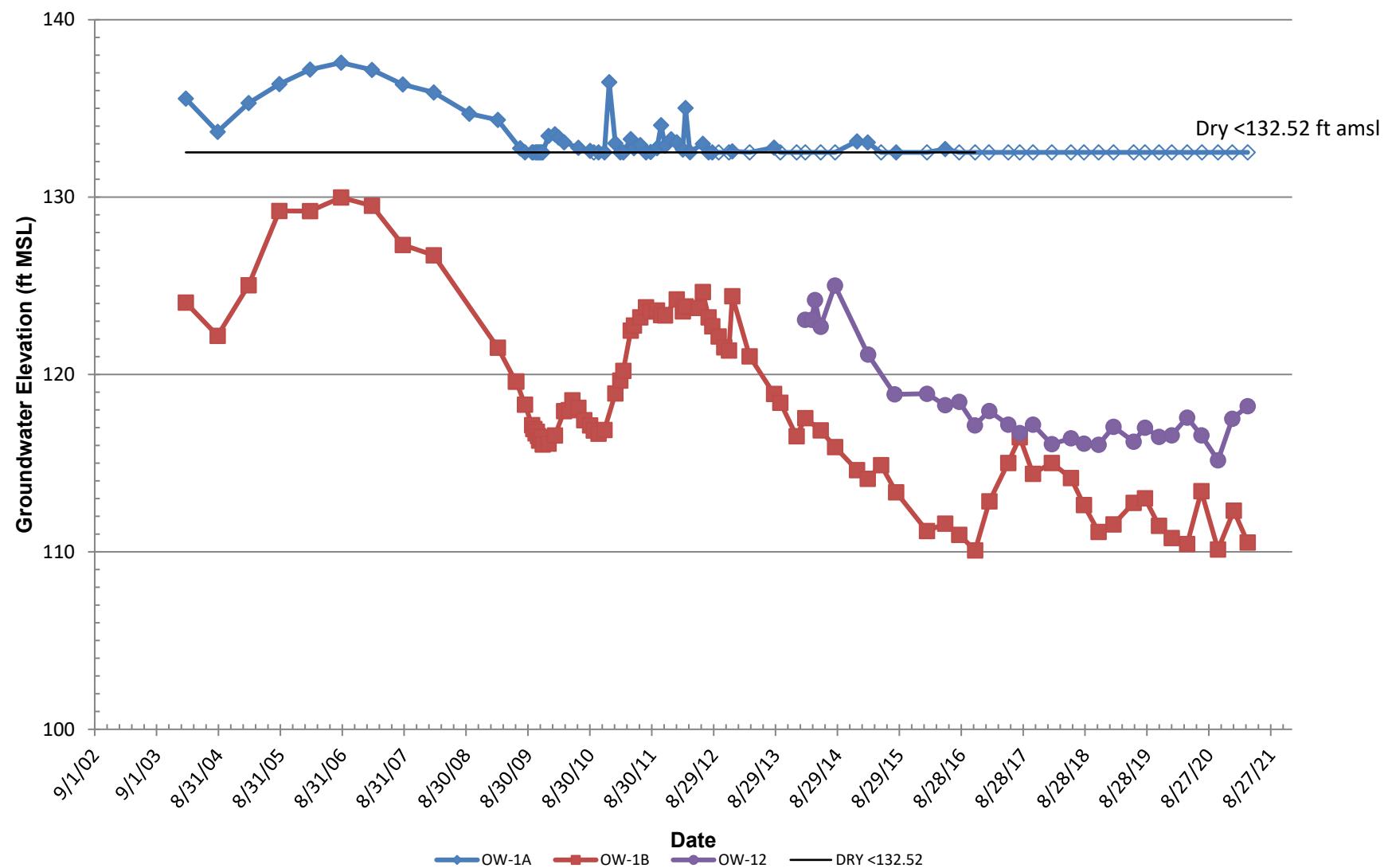
	Gravel		Clayey Gravel		Poorly Graded Sand		Silt		Silty Sand		Clayey Silt or Silty Clay
	Gravely Clay		Clay		Well Graded Sand		Gravelly Sand		Clayey Sand		Well Screened

- Zone A Water Level (April 2021)
- Zone B Water Level (April 2021)

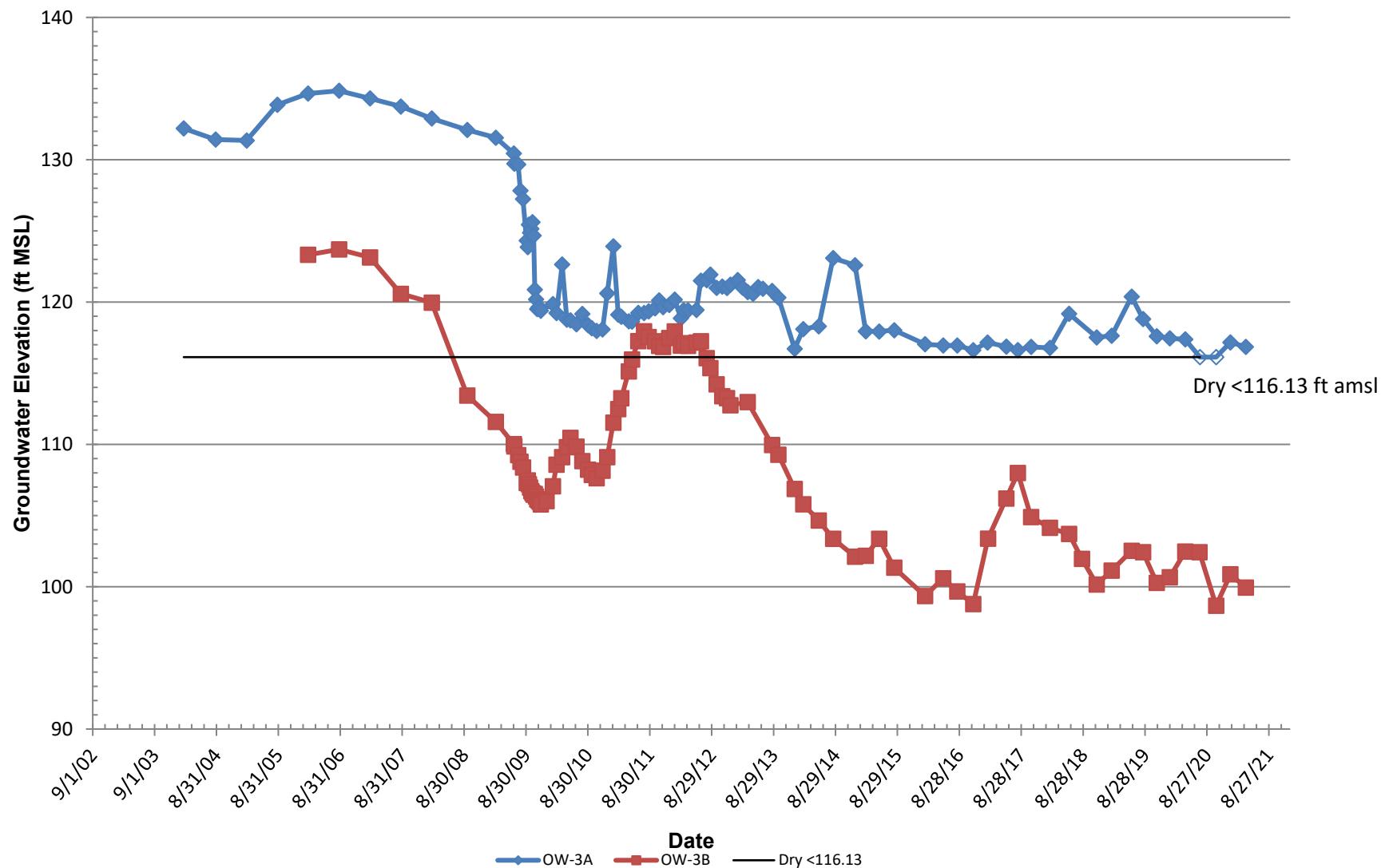
**LITHOLOGIC CROSS-SECTION  
A TO A'**



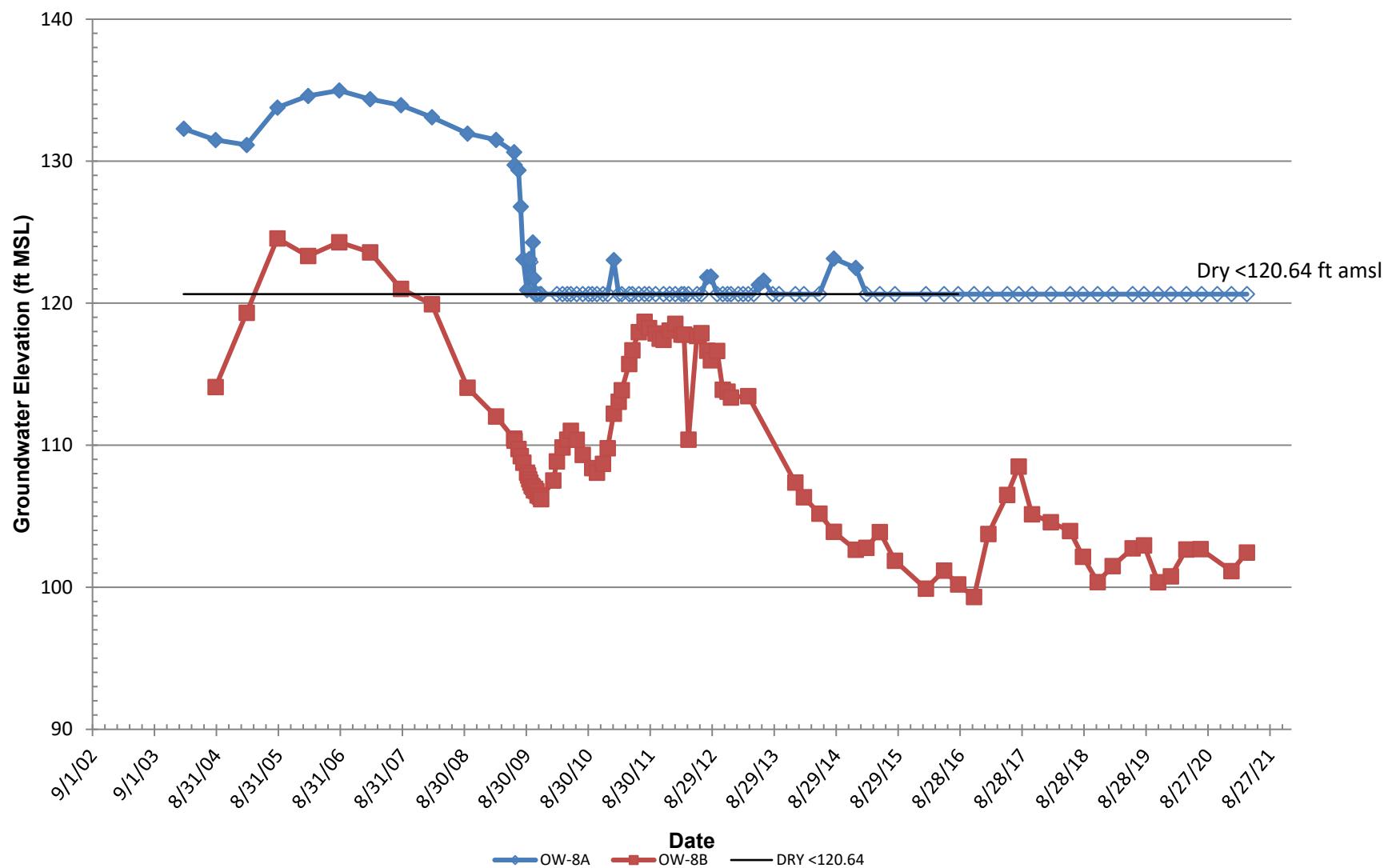
**Figure F-6**  
**Omega Chemical Superfund Site**  
**OW-1A, OW-1B, and OW-12 Well Hydrographs**  
**2004 to 2021**



**Figure F-7**  
**Omega Chemical Superfund Site**  
**OW-3A and OW-3B Well Hydrographs**  
**2004 to 2021**



**Figure F-8**  
**Omega Chemical Superfund Site**  
**OW-8A and OW-8B Well Hydrographs**  
**2004 to 2021**



## **ATTACHMENT G**

### **Field Forms**

## GROUNDWATER MONITORING FORM

Omega - GW Monitoring Q2

Date: 4/12, 4/13, 4/16

Technician: K. Decker, R. Borckay

Well ID	Well Diameter	Sample Grouping	Take Sample? (Y/N)	Date & Time (hh:mm)	PID (ppm)	Depth to Water (ft btoc)	Previous Depth to Water (ft btoc)	Total Depth (ft btoc)	Previous Total Depth (ft btoc)	Screen Interval (ft btoc)	HMI (ft btoc)
EW-1	6		N	4/13/21 0901	Ø	0'	84.01	-	NM	72 - 87	86.34
EW-2	6		N	4/13/21 0912	Ø	83.67'	84.15	-	NM	72 - 87	83.92
EW-3	6		N	4/13/21 0918	Ø	82.41'	81.94	-	NM	70 - 85	82.17
EW-4	6		N	4/13/21 0926	Ø	79.65'	80.05	-	NM	71 - 86	79.26
EW-5	6		N	4/13/21 0931	0.105	78.05'	81.85	-	NM	70 - 85	77.55
PZ-1	2		N	4/13/21 0944	Ø	85.70'	86.4	87.25'	87.3	68 - 88	
PZ-2	2		N	4/13/21 0940	Ø	0'	84.05	87.30'	84.3	64 - 84	
PZ-3	2		N	4/13/21 0920	Ø	88.50'	DRY	89.00'	89.05	69.8 - 89.8	
PZ-4	2		N	4/13/21 0937	0.536	70.87'	70.7	89.05'	89	70 - 90	
PZ-9	2		N	4/12/21 0906	0.086	83.43'	84.31	89.85'	89.95	70 - 90	
OW1A	4		N	4/16/21 0815	Ø	DRY	DRY	82.55'	82.58	62.5 - 77.5	
OW1B	4		N	4/13/21 1010	0.169	94.75'	94.9	118.03'	118.15	110 - 120	
OW2	4		N	4/13/21 0816	4.022	Ø	DRY	79.30'	79.5	60 - 80	
OW3A	4		N	4/13/21 0925	Ø	79.48'	81.41	81.68'	81.82	63 - 83	
OW3B	4		N	4/13/21 0931	0.365	95.20'	96.51	121.90'	121.95	112 - 122	
OW7	4		N	4/12/21 0800	Ø	DRY	DRY	89.0	89.1	70.9 - 90.9	
OW8A	4		N	4/13/21 0906	Ø	74.41'	78.09	79.05'	79.1	60.4 - 80	
OW8B	4		N	4/13/21 0908	0.008	98.40'	99.7	125.90'	126	116 - 126	
OW9	4		N	4/12/21 0845	Ø	84.55'	85.05	89.72'	89.8	70 - 90	
OW10	4		N	4/12/21 0903	5.120	75.25'	76.75	87.10'	89.2	69.5 - 89.5	
OW11	4		N	4/16/21 0735	Ø	86.15'	86.17	98.65'	98.73	80 - 100	
OW12	4		N	4/12/21 1315	23.84	90.21'	90.92	99.85'	100	80 - 100	
DPE-3	4		N	4/13/21 1002	-	89.38'	89.18	-	100	40 - 100	91.63
DPE-4	4		N	4/12/21 1301	-	89.13'	89.44	-	100	40 - 100	90.84
DPE-5	4		N	4/12/21 1248	-	85.15'	86.83	-	100	40 - 100	91.68
DPE-8	4		N	4/12/21 1254	-	87.52'	86.48	-	100	40 - 100	89.50
DPE-9	4		N	4/13/21 0806	-	90.81'	90.43	-	100	40 - 100	91.57
VE-7D	4		N	4/16/21 0741	0.106	85.98'	85.99	-	100	40 - 100	94.40 + Not accurate

LD-1 6"  
LD-2 2"4/13/21 0912 - 0.50'  
4/13/21 1103 2.57' 3.73'

VE-10D	4		N	4/12/21 0910	0.435	84.60	94.3	-	100	40 - 100	84.27
OW13B	4		N	4/16/21	86.79	98.05	97.62	140.0	140.3	130 - 140	

VG-10D

4/13/21 1054 NM 94.57

94.16

DPE-3

4/16/21 1146 NM 87.90

90.32

DPE-8

4/16/21 1149 NM 84.00

86.49